Alfarabi's Philosophy of Plato and Aristotle

TRANSLATED, WITH AN INTRODUCTION

by Muhsin Mahdi

THE FREE PRESS OF GLENCOE

Printed in the United States of America

For information, address:

The Free Press of Glencoe
A Division of The Macmillan Company,
The Crowell-Collier Publishing Company
60 Fifth Avenue, New York 11

DESIGNED BY BERNARD SCHLEIFER

Library of Congress Catalog Card Number: 62-11856

FOREWORD

The Agora Editions welcomes the addition of Dr. Mahdi's translation of Alfarabi to its list. The *Philosophy of Plato and Aristotle* is one of the most authoritative commentaries on these two authors and has never been available in its entirety in English. It is of incomparable value not only for the understanding of Arabic thought but also for an authentic interpretation of Plato and Aristotle. This book goes to the origins of modern philosophy; and it is to be hoped that its publication will mark the beginning of a general interest in the Arabic view of ancient thought which is so often mentioned but so rarely studied. It is of interest to the serious student of philosophy as well as to the historian.

The translation is of the highest degree of accuracy consistent with intelligibility. Hence the reader can judge of Alfarabi's thought with confidence that he is not studying the modern thought of the translator. Thus we continue our policy of presenting unavailable classics of political thought in scholarly translations.

ALLAN BLOOM

General Editor of the Agora Editions

CONTENTS

ALFARABI'S
PHILOSOPHY OF
PLATO AND ARISTOTLE

INTRODUCTION

The general practice of introducing a new work by placing it in the broader context of the tradition to which it belongs encounters a peculiar difficulty in the case of Alfarabi's *Philosophy of Plato and Aristotle.* That is because this work does not conform to the current view of the Islamic philosophic tradition. This view was developed in the nineteenth century and is based on a wide range of representative works and authors. It sees Islamic philosophy as a mixture, blend, or synthesis of Aristotelian, Platonic, Neo-Platonic, and, of course, Islamic doctrines. It represents Moslem philosophers as being guided by the belief in the harmony of various philosophic and religious ideas and traditions, with little awareness of the essential heterogeneity of the elements they sought to combine. The estimates of the extent to which individual Moslem philosophers were aware of possible conflict between philosophy and religion may vary, but the prevailing view is satisfied that they were able to resolve this conflict in favor of their religious faith and the Islamic world-view. This conception of the general character of the Islamic philosophic tradition is not wholly erroneous. It was, in fact, propagated by the Moslem philosophers themselves in their effort to convince their fellow Moslems that the teachings of philosophy did not contradict the revealed teaching and that philosophic activity, far from undermining religion, was undertaken in defense of the faith.

The labor of the last generation of scholars has presented convincing evidence that the founder of this tradition was Alfarabi (al-Fārābī, ca. 870-950). But as in the case of most other Moslem philosophers, Alfarabi is known primarily through his popular and political writings—the *Harmonization of the Opinions of Plato and Aristotle,* the *Virtuous City,* the *Political Regime,* and so on—all of which seem to bear out the common view of Islamic philosophy

outlined above. This is particularly true of the first of these works. Alfarabi was aroused by public controversies over such issues as the creation of the world, the survival of the soul after death, and reward and punishment in the hereafter, in which it was claimed that the two leading philosophers had disagreed—that is, that Aristotle, unlike Plato, denied that such things were possible and hence held views in conflict with religious beliefs. He responded by writing the *Harmonization of the Opinions of Plato and Aristotle* in which he undertook to show that, properly understood, Aristotle's opinions on all such issues are in agreement with those of Plato and hence with religious beliefs. In general, exception can be taken to Alfarabi's mode of argumentation in that work. The reasoning is too flexible for a reader having first-hand acquaintance with the works of Plato and Aristotle or of Alfarabi's commentaries on them; in many instances his conclusions depend upon ones's accepting as genuine some documents of questionable authenticity, notably the extracts from the *Enneads* of Plotinus that gained currency in Islamic thought as the *Theology of Aristotle*. As to the substance of his argument, it is sufficient to point out that when the great Moslem theologian and mystic al-Ghazālī (d. 1111) set out to expose the "intentions" of the philosophers, he refused to pay the slightest attention to this work and was able to assert that the real views of Aristotle and Alfarabi on these issues—that is, the views for which they believed they had proof and that they presented in their scientific or philosophic works—were exactly the opposite of the ones defended by Alfarabi in the *Harmonization of the Opinions of Plato and Aristotle*.

Alfarabi's scientific or philosophic works proper—his commentaries, especially his large commentaries, on individual works by Plato and Aristotle—which established his reputation as the greatest philosophic authority next to Aristotle (Alfarabi was known as the "Second Master") and which could be expected to enlighten us on the principles underlying his popular and political works, have always remained inaccessible to the general public, and for the most part inaccessible even to the small scholarly circle interested in the history of Islamic philosophy. Many of these works seem to be lost; the ones that have survived remain for the most part unedited and hardly ever studied; and the few that have

been edited deal with specialized subjects whose relevance to the general character of Alfarabi's thought and of Islamic philosophy is not easy to establish.

It is true that this situation can only partially be remedied by the present work, which presupposes extensive knowledge of the works of Plato and Aristotle that were available to Alfarabi and acquaintance with his specialized commentaries on them. Yet it has the distinct advantage of being Alfarabi's only comprehensive account of the philosophy of Plato and Aristotle as well as of his own views on the nature of philosophy and religion. It can, therefore, be expected to provide an answer to some of the problems raised by the works in which the harmonization of the doctrines of Plato and Aristotle through Neo-Platonism and the harmonization of philosophy and religion occupy the foreground.

To look for that answer, it is advisable to begin with the most apparent and striking features. Alfarabi presents here three separate and largely independent accounts of philosophy—one in his own name, another in the name of Plato, and a third in the name of Aristotle—without attempting to harmonize any of the doctrines or teachings of the two masters. He departs from this course in two instances. (1) At the end of the *Attainment of Happiness* (I, sec. 64) he requests the reader to make clear to himself that Plato's philosophy and Aristotle's philosophy have the same aim or purpose and that Plato and Aristotle "intended" to present the same philosophy or had the same end in view when presenting their philosophy. (2) At the beginning of the *Philosophy of Aristotle* (III, sec. 1) Alfarabi says that Aristotle had the same view of the "perfection of man" as Plato, but was dissatisfied with the lack of sufficient evidence for that view; hence he chose to "begin" from a different position, proceed differently, and so forth. Readers may differ on the interpretation of these two passages and on their significance for the understanding of Alfarabi's view of the relation between Plato and Aristotle. But Alfarabi's reticence on the area of agreement between Plato and Aristotle (as regards either their explicit or implicit doctrines) is certainly striking.

Furthermore, nowhere in the *Philosophy of Plato and Aristotle* do we find any reference to the writings, or any traces of the doc-

trines, commonly associated with Neo-Platonism. There is, for instance, no reference to the *Theology of Aristotle* and no trace of the theory of emanation. Many questions come to mind with respect to Alfarabi's account of some of the Platonic dialogues. We are not certain how many of them he had access to, and his account of quite a few seems rather fanciful. What is important in the present context, however, is that he nevertheless was able to re-present the entire philosophy of Plato in its political framework and that nowhere does he resort to the typically Neo-Platonic (metaphysical or mystical) interpretations of Plato in order to fill the gaps in his information.

We turn now to the more difficult issue of the relation between philosophy and religion. Since the student who attempts to clarify this issue on the basis of Alfarabi's published popular and political works must admit that it is not treated directly and explicitly in any one of them, the fact that it is so treated in the *Philosophy of Plato and Aristotle* is of particular importance, especially when it occurs in the *Attainment of Happiness* where Alfarabi presents his own views. The main argument of the *Attainment of Happiness* (I, secs. 1-49) is so constructed as to lead inevitably to a view of the relation between philosophy and religion that Alfarabi subsequently attributes to the "ancients." But throughout this argument, he does not speak of philosophy at all, and refers to religion in a single passage (I, sec 33) and only in passing. However, in a kind of epilogue to the *Attainment of Happiness* (I, secs. 50 ff.) Alfarabi asserts that "philosophy is prior to religion in time," and explains and defends the view that "religion is an imitation of philosophy." When the term "philosophy" is introduced for the first time (I, sec. 53), it is defined as the scientific state of the soul or of the mind—the quest and love for the highest wisdom or for theoretical perfection. Alfarabi adds, however, that theoretical perfection alone is qualified, incomplete, or partial perfection, and that the man who limits himself to the theoretical sciences is not a perfect or true philosopher. The perfect philosopher, like Alfarabi's "supreme ruler," must also have the capacity for teaching all the citizens and for forming their character so as to enable everyone to achieve the happiness or perfection he is capable of attaining by nature. This, in turn,

requires the ability to demonstrate as well as to persuade, to present the beings as they are as well as to represent them through images. But reverting thereafter to the restricted definition of philosophy, he now identifies it with the demonstrative knowledge of the beings, conceived in themselves, while religion is defined as the assent, secured by persuasion, to the images of these beings. Religion is an imitation of philosophy in the restricted sense inasmuch as both comprise the same subjects and both give an account of the ultimate principles of the beings, or insofar as religion supplies an imaginative account of, and employs persuasion about, things of which philosophy possesses direct and demonstrative knowledge. The conception of the relation between philosophy and religion that Alfarabi attributes to the "ancients" dissolves, however, as soon as we turn to Alfarabi's definition of perfect philosophy and of the perfect philosopher. Now a new relation emerges in which religion is part of the function of the philosopher as supreme ruler and lawgiver; it is one of the things he needs as ruler and teacher of the nonphilosophic multitude. Only the perfect philosopher *knows* the beings, represents them properly, and can judge whether the images do in fact come "as close as possible to the essences" of the things imitated. Alfarabi assigns to the philosopher a function ordinarily associated with the prophet. However, the philosopher promulgates religions by virtue of his theoretical knowledge and prudence, and through his mastery of the arts of rhetoric and poetry. The only example offered by Alfarabi in this context is what Plato does in the *Timaeus*.

Alfarabi's account of what one might call the philosophic religion leaves unanswered the more immediate question of what he thought of nonphilosophic religions or about the religions not originated by philosophers, which could not be understood as imitations of philosophy in the strict sense and which did not follow philosophy in time. Alfarabi does not discuss this question in his own name. It is, however, raised and answered in his account of the philosophy of Plato (II, sec. 7). Alfarabi's Plato begins by investigating what constitutes the perfection of man as man, which he finds to consist in a certain kind of knowledge and in a certain way of life. After finding out what that knowledge is, that man is

"naturally" capable of attaining it, and that man has a faculty by which he can pursue an art that investigates that knowledge "to the point of achieving it," Alfarabi's Plato searches for the art in question and begins his search by investigating the arts "generally accepted" among the citizens of cities and nations. The first art, or group of arts, to which he turns his attention is "religious speculation," the "religious investigation of the beings," and the "religious syllogistic art." According to Alfarabi, this investigation of Plato takes place in the *Euthyphron*, a dialogue whose subject is "piety" or "that which is to be feared." But the "religious syllogistic art" recalls Islamic dialectical theology and Islamic jurisprudence rather than any of the arts investigated in the *Euthyphron*. In any case, Alfarabi's Plato is perfectly open-minded about religion and the claims of the religious arts, which is shown by the fact that he pursues three alternative investigations to discover whether they (*a*) supply the knowledge he is looking for, (*b*) do not supply it at all, or (*c*) are not adequate in this respect. Having considered these alternatives, he determines exactly "how much" knowledge these religious arts supply and concludes that the amount they supply is "not sufficient." He is thus forced to proceed and investigate other arts, until he discovers the one that is adequate and sufficient for attaining the knowledge he is seeking.

In the *Philosophy of Plato* the art in question remains nameless: it is "another" art, that is, other and higher than dialectic. In the *Philosophy of Aristotle* the art that leads to knowledge in the unqualified sense is called the "art of demonstration." Alfarabi's Aristotle, who observes a grave silence about religion, simply identifies the art of demonstration with the highest wisdom (III, sec. 9). In the *Attainment of Happiness*, too, the highest science is theoretical knowledge or the knowledge attained through the art of demonstration; the other sciences and arts that employ persuasion and imitation are given subordinate positions (I, sec. 50). Alfarabi's Aristotle, whose chief concern is to find what is self-evident or admits of demonstration, is presented as pursuing his investigations of nature and the cosmos without paying attention to the claims of the religious arts. Similarly, Alfarabi is able to offer a comprehensive account of how the citizens of cities and nations can attain the lower happiness in this life *and* the highest happiness in the world beyond by discussing only human virtues and arts. When he finally comes to speak of religion, he presents it as a subject that had already been known, defined, and assigned its proper function by the "ancients." He does not question their judgment or conclusions. The result of Plato's investigation of the religious arts in the *Euthyphron* seems to be accepted by Alfarabi's Aristotle and by Alfarabi himself as having supplied an adequate answer to the question; the cognitive value of religion is no longer in need of discussion.

On every one of these issues, the *Philosophy of Plato and Aristotle* presents a position that seems to stand in sharp contrast with, if not to contradict, Alfarabi's teachings in his popular and political works. This makes it mandatory that one should undertake a more thorough investigation of the present work and a fresh examination of the popular and political works in the light of the results of this investigation. The fact that Alfarabi's popular and political works have been accessible long before the present work should not be allowed to obscure the fact that it is here that he gives an account of the theoretical foundation on the basis of which those other works should be understood, and of the philosophic principles that are applied in the other works. Although not wholly erroneous, the generally accepted view of Alfarabi's thought and of the philosophic tradition he founded must be seen in the new perspective provided by the *Philosophy of Plato and Aristotle*.

Such readers as are not able to consult the Arabic original may be curious to know whether this version is literal and may wonder about some peculiarities of its style, especially such as are not in keeping with perfectly flowing English. It is necessary to state that in the present translation the requirement of intelligibility has been given precedence over literalness and that idiomatic niceties have been subordinated to the requirement of remaining faithful to the style of the Arabic text. This choice was imposed by the text itself. Alfarabi's style is never obscure. In many places, however, it is extremely compressed and difficult to comprehend without adequate preparation and effort. Because

a translation cannot escape interpreting the original to some extent, this version may be somewhat easier to read (partly because of the divisions, symbols, and punctuation marks, none of which are to be found in the Arabic manuscripts of the text). But no effort was made to cover up the many difficulties and problems with which the text is riddled. Alfarabi's style has been justly characterized by Pico della Mirandola as *grave et meditatum*. As if to insure that the impatient reader turn away to what for him would be more profitable tasks, Alfarabi tries his patience at the very beginning of this work.

Part I

The Attainment of Happiness

THE ATTAINMENT OF HAPPINESS 1

i

1 The human things through which nations and citizens 2
of cities attain earthly happiness in this life and supreme happiness
in the life beyond[1] are of four kinds: theoretical virtues, delibera-
tive virtues,[2] moral virtues, and practical arts.[3] 5

2 Theoretical virtues consist in[1] the sciences whose ultimate
purpose is to make the beings and what they contain intelligible
with certainty. This knowledge is in part possessed by man from
the outset without his being aware of it and without perceiving
how he acquired it or where it comes from. This is primary knowl-
edge.[2] The rest is acquired by meditation, investigation and infer-
ence, instruction and study. The first premises are known by 10
primary knowledge; on their basis one proceeds to the subsequent[2]
knowledge gained from investigation, inference, instruction, and
study. By investigation or instruction one seeks the knowledge 3
of things that are unknown from the outset: when they are being
investigated and their knowledge is sought, they are problems; and
afterwards when man by inference or study has been led to
conviction, opinion, or knowledge[3] about them they become con-
clusions.[4]

3 The attainment of certain truth is aimed at in every prob-
lem. Yet frequently we do not attain certainty. Instead we may 5
attain certainty about part of what we seek, and belief and
persuasion about the rest. We may arrive at an image of it or
wander from it and believe that we have encountered it without
having done so. Or we may become perplexed, as when the
arguments for and against strike us as having equal force. The
cause of this [confusion] is the variety of the methods we use in
treating a problem; for a single method could not lead us to 10

different convictions about problems. No, what leads us to different convictions about the many classes of problems must be various methods.[1] Unaware of their varieties or of the specific differences between them, we believe we are using the same method for every problem. Thus, although for one problem we ought to use a method that leads to certainty and for another a method with which to arrive at a similitude or image or a method that leads to persuasion and belief, we think that the method is one and the same and that the method we use in the latter case is the same as the one we use in the former. Such is the situation in which we find ourselves, for the most part, and also the great majority of the speculators and investigators we see around us.[2]

4 So let it be clear to you that before setting out to investigate problems we must realize that all these methods have to be learned as an art:[1] we must know how to distinguish the various methods by means of specific differences and marks designating each, and we must have our innate and natural aptitude for science developed through an art that can provide us with knowledge of these differences since our innate capacity alone is insufficient for differentiating these methods from each other.[2] This means that we must ascertain (1) the conditions and states of the first premises and the order of their arrangement if they are to lead the investigator necessarily to the truth itself and to certainty about it; (2) the conditions and states of the first premises and the order of their arrangement when they cause the investigator to wander from the truth, perplex him, and prevent him from perceiving even where the truth of his problem might lie; (3) the conditions and states of the first premises and the order of their arrangement when they provide belief and persuasion about a problem and make one even fancy that this is certainty although it is not; and (4) the conditions and states of the first premises and the order of their arrangement when they lead the investigator not to the truth itself but to a similitude and image of truth.[3] Only after knowing all of this should we set out to seek knowledge of the beings by investigating them ourselves or being instructed by others. For it is only by knowing everything we have mentioned that we find out how to investigate and how to instruct and study. This [logical] faculty enables us to discern whether what we infer is certain

knowledge or mere belief, whether it is the thing itself or its image and similitude. It enables us also to examine what we learn from others and what we teach others.

5 The primary cognitions relative to every genus of beings are the *principles of instruction*[1] in that genus, provided they possess the states and conditions through which the student is led to the certain truth about what he seeks to know in the genus.[2] If all or most of the species comprised by the genus should possess causes *by* which, *from* which, or *for* which[3] these species exist, then these are the *principles of being*[1] of the species comprised by the genus, and one should attempt to know them. Now when the primary cognitions relative to some genus are identical with the causes of the species comprised by that genus, then the principles of instruction in it are identical with the principles of being. Demonstrations proceeding from these primary cognitions are called demonstrations of *why* the thing is, for in addition to knowledge of *whether* the thing is, they give an account of *why* it is. But when the cognitions possessing the states and conditions [that lead to the certain truth about what we seek to know] in a genus of beings are the grounds of our knowledge *that* the species comprised by that genus exist, without being the grounds of the existence of any of them, then the principles of instruction in that genus are different from the principles of being. The demonstrations proceeding from *these* cognitions will be demonstrations of *whether* the thing is and demonstrations of *that* it is, not demonstrations of *why* it is.[4]

6 The principles of being are four:[1] (1) *What, by what,* and *how*[2] the thing is—these have the same meaning [inasmuch as they signify the *formal* cause]. (2–3) *From what*[3] it is. (4) *For what* it is [which signifies the *final* cause]. (For by the question *from what it is* we signify either [2] the *agent* principles or [3] the *materials*;[4] whereupon the causes and principles of being become four.) The genera of beings [may be divided into three kinds, according to the number of their causes].[5] The first admits of having no cause at all for its existence—this is the ultimate principle for the being of all other beings regarding which we have only the principles of *our* knowledge of it [and not the principles of its being]. The second possesses all the four. The third admits

of having only three of them; it cannot possess the material principle.[6]

7 Every science whose sole aim is to make the beings intelligible seeks first to ascertain the presence of everything comprised by the genus[1] of which it seeks to know the species, and next to ascertain the principles of being of the species that possess such principles and find out how many principles they possess. If they possess all the four principles, one should look for all of them rather than confine himself to some and exclude others. If they do not possess all the four, one should attempt to understand how many principles can be found in them, whether three or two or one.[2] Moreover, one should not confine himself to the proximate principles of the genus, but look for the principles of these principles, and the principles of the latter, until he arrives at the furthest principle he can find in it, at which he should come to a stop. If this ultimate principle—which is the ultimate principle with respect to this genus—also has a principle, and the latter principle is not related to this genus but to another, one should not reach for it but set it aside, postponing the inquiry into it until he comes to inquire into the science that comprises the other genus.[3]

8 When the principles of instruction in the genus into which one inquires are identical with the principles of being of the species it comprises, he should employ the principles of instruction and proceed with the matter at hand until he covers all the species comprised. He will then know with respect to every problem both *whether* the thing is and *why* it is, until he arrives at the ultimate principle to be reached in the genus. On the other hand, when the principles of instruction in a genus of beings are different from the principles of being (this happens only in the genus whose principles of being are obscure and not known from the outset, and whose principles of instruction are not of the same rank, but inferior to its principles of being), then the only way to get to know the principles of being is to start from the principles of instruction and arrange them to make the conclusion follow necessarily from them. In this case the resulting conclusion is itself the source to which the principles of instruction that had been so composed and arranged owe their existence. So the principles of

instruction are here the grounds of *our knowledge* of the principles of being, while the conclusions resulting from them[1] are the sources and the grounds of the existence of the premises that happened to be employed as principles of instruction.[2] In this manner one ascends from knowledge of the principles of instruction, which are inferior to the principles of being, to certainty about the principles of being, which are higher. If the principle of being upon which we come in this way has a further principle that is still higher and more remote, we make the former into a premise and ascend to the principle of the principle. We keep following this course until the very ultimate principle to be found in that genus is reached.

9 Having ascended to a principle *B* through things (A, A_1, A_2) that are known and that owe their existence to this principle, it is possible that there still will be other unknown things (A_3, A_4, . . .) that owe their existence to this principle. Originally, the latter were hidden from us and we had no knowledge of them. But once we employ this principle *B* (which is now known to us) as a premise and proceed to know these other things (A_3, A_4, . . .) that originate from it, *B* will supply us knowledge of both *whether* those other things are and *why* they are. For it is possible that many things (A, A_1, A_2, . . .) be originated from a single principle *B*, and that, when we begin, only one of them *A* is known to us, while the principle *B* and the other things (A_1, A_2, . . .) that originate from it remain hidden. We ascend from the one thing *A* that we know to gain knowledge of the principle *B*, and this one thing *A* will supply us the knowledge only *that* the principle *B* exists. Then we employ the principle *B* as a premise to explain the other things (A_1, A_2, . . .) that originate from it, and thus proceed to know both that they are and the cause of their being. If this principle *B* has a further principle *C*, we employ *B* again to explain its principle *C*; *B* will in turn supply us with the knowledge that its higher principle *C* exists. We are thus employing *B* to explain two things: in the first [that is, its principle *C*] it supplies us with the knowledge only that it exists, while in the second [that is, the thing(s) that originate from it, but were at first unknown to us (A_1, A_2, . . .)] it supplies us with both the knowledge that it exists and the cause of its being. Likewise, if the

principle-of-the-principle C is similar—in that it also has a principle D, and there are things (B_1, B_2, . . .) that originate from it—we employ the principle-of-the-principle C to explain its principle D as well as to explain these other hidden things (B_1, B_2, . . .) that originate from it. Whereupon this principle C, too, will supply us, regarding its principle D, with the knowledge only that it exists, and, regarding these other things (B_1, B_2, . . .), with both the knowledge that they are and the cause of their being.

10 The first genus of beings into which one should inquire is that which is easier for man and in which perplexity and mental confusion are less likely to occur.[1] This is the genus of numbers and magnitudes. The science that comprises the genus of numbers and magnitudes is mathematics. One should begin first with numbers, give an account of the numbers [or units] by which things are measured, and concomitantly, an account of how numbers are used to measure the other magnitudes [or quantities][2] that can be measured. Moreover, one should give an account of magnitudes: their figures, their positions, and their orderly proportion, composition, and symmetry. One should inquire into (*a*) magnitudes in which number is inherent. To these magnitudes he should attribute the measurement and orderly proportion, composition, and symmetry inherent in them because of number. These magnitudes possess the properties of measurement and orderly proportion, composition, and symmetry for two reasons: because they are magnitudes and because they are numbered. (*b*) As to the magnitudes in which number is not inherent, it is only because they are magnitudes that they possess such measurement and orderly proportion, composition, or symmetry as inhere in them. Next one should inquire into all the other beings, and attribute measurement and orderly proportion and symmetry to the ones in which these are inherent because of number alone. One should inquire also into all the things that possess magnitude and attribute to them everything that inheres in magnitude as magnitude, such as figures, positions, measurement, proportion, composition, and symmetry. To the things in which these mathematical properties are inherent because of both number and magnitude, he should attribute both kinds of mathematical properties, until he exhausts all the beings in which these properties

are present because of number and magnitude. This will also lead[3] to optics, spherics and astronomy, music, the study of weights, and mechanics.[4] One should now begin and assume everything with respect to number and magnitude that constitutes the principles of instruction in the genus into which he inquires, arrange these principles following the order obtained through the above-mentioned [logical] faculty, and seek to give an account of each mathematical property present in the things into which he inquires, until he exhausts all of them or achieves in that genus the degree of knowledge necessary for elaborating the axioms of the art. One need not proceed further, because what remains is similar in kind.

11 It is characteristic of this science that inquires into numbers and magnitudes that the principles of instruction in it are identical with the principles of being. Hence all demonstrations proceeding from its principles combine the two things—I mean they give an account of the thing's existence and of why it exists: all of them are demonstrations of both *that* the thing is and *why* it is. Of the principles of being, it employs [only the formal, that is] *what* the thing is and *by what* and *how* it is, to the exclusion of the other three. For numbers and magnitudes, in the mind and stripped from the material, have no principles related to their genus apart from the principles of their being just mentioned. They possess the other principles only on account of their coming into being by nature or the will, that is, when they are assumed to be in materials. Since this science does not inquire into them as being in materials, it does not deal with what is extraneous to them so far as they are not in materials.[1]

12 One begins,[1] then, first with numbers [that is, arithmetic], proceeds next to magnitudes [that is, geometry], and then to all things in which number and magnitude are inherent essentially (such as optics, and the magnitudes in motion, which are the heavenly bodies), music, the study of weights, and mechanics. In this way one begins with things that may be comprehended and conceived irrespective of any material. He then proceeds to things that can be comprehended, conceived, and intellected by only slight reference to a material. Next, the things that can only be comprehended, conceived, and intellected with slightly more

reference to a material. He continues thus toward the things wherein number and magnitude inhere, yet that which can be intellected in them does not become intelligible except by progressively greater reference to the material. This will lead him to the heavenly bodies, then music, then the study of weights and mechanics, where he is forced to deal with things that become intelligible only with difficulty, or that cannot exist, except when they are in materials. One is now forced to include principles other than *what, by what,* and *how*. He has come to the borderline between the genus that does not have any other principle of being apart from *what* it is, and the genus whose species possess the four principles. It is at this point that the *natural* principles come into view.[2]

13 At this juncture one ought to set out to know the beings that possess the four principles of being: that is, the genus comprising the beings that can be perceived by the intellect only when they are in materials. (Indeed the materials are called [by some][1] *the* natural things.) The inquirer ought to seize upon all the principles of instruction—that is, the first premises—relative to the genus consisting of *particular*[2] things. He also should look into the primary knowledge he has and adopt from it whatever he recognizes as appropriate for being made into principles of instruction in this science.

14 He then should begin to inquire into bodies and into things that are in bodies. The genera of bodies constitute the world and the things comprised by the world. In general, they are the genera of sensible bodies or of such bodies that possess sensible qualities: that is, the heavenly bodies; then earth, water, air, and things of this kind (fire, vapor, etc.); then the stony and mineral bodies on the surface of the earth and inside it; and finally, plants, irrational animals, and rational animals. He should give an account of (*a*) the fact of the being and (*b*) all the principles of being of every one of these genera and of every one of the species of every genus: that is, in every problem relative to them, he should give an account of (*a*) the fact *that* the thing is and (*b*) *what, by what,* and *how* it is, *from what* it is, and *for what* it is. In none of them is he to confine himself to its proximate principles.

Instead he should give an account of the principles of its principles and of the principles of the principles of its principles, until he arrives at its ultimate corporeal principle.[1]

15 The principles of instruction in most of what this science comprises are distinct from the principles of being,[1] and it is through the principles of instruction that one comes to know the principles of being. For in every genus of natural things the principles of instruction are inferior to the principles of being, since the principles of being in such a genus are the grounds to which the principles of instruction owe their existence. Hence the ascent toward knowledge of the principles of being of every genus or species can be made only through things that originate in these principles. If these happen to be proximate principles *A* that in turn have other principles *B*, the proximate principles *A* should be employed as principles of instruction from which to ascend to knowledge of their principles *B*. Then, when these principles *B* become known, one proceeds from them to the principles of these principles, *C*, until he arrives at the ultimate principles of being in the genus. If, after ascending from the principles of instruction to the principles of being and the knowledge of the principles of being, there are (in addition to the primary cognitions from which we ascended to the principles) other things originating from these principles, and which are still unknown, then we proceed to use these principles of being as principles of instruction and so come to know the other, inferior things. In relation to the other things, our principles are now both principles of instruction and principles of being. We follow this procedure in every genus of sensible bodies and in each of the species of every genus.[2]

16 When one finally comes to inquire into the heavenly bodies and investigate the principles of their being, this inquiry into the principles of their being will force him to look for principles that are not natures or natural things, but beings more perfect than nature and natural things. They are also not bodies or in bodies. Therefore one needs another kind of investigation here and another science that inquires exclusively into beings that are metaphysical. At this point he is again standing between two

sciences: the science of nature and [metaphysics or] the science of what is *beyond* natural things in the order of investigation and instruction and *above* them in the order of being.[1]

17 When his inquiry finally reaches[1] the stage of investigating the principles of the being of animals, he will be forced to inquire into the soul and learn about psychical [or animate] principles, and from there ascend to the inquiry into the rational animal. As he investigates the principles of the latter, he will be forced to inquire into (1) *what, by what,* and *how,* (2–3) *from what,* and (4) *for what* it is. It is here that he acquaints himself with the intellect and things intelligible. He needs to investigate (1) *what* the intellect is and *by what* and *how* it is, and (2–3) *from what* and (4) *for what* it is. This investigation will force him to look for other principles that are not bodies or in bodies, and that never were or ever will be in bodies. This inquiry into the rational animal will thus lead him to the same conclusion as the inquiry into the heavenly bodies. Now he acquaints himself with incorporeal principles that are to the beings below the heavenly bodies as those incorporeal principles (with which he became acquainted when investigating the heavenly bodies) are to the heavenly bodies. He will acquaint himself with the principles for the sake of which the soul and the intellect are made, and with the ends and the ultimate perfection for the sake of which man is made. He will know that the natural principles in man and in the world are not sufficient for man's coming to that perfection for the sake of whose achievement he is made. It will become evident that man needs some rational, intellectual principles with which to work toward that perfection.[2]

18 At this point the inquirer will have sighted another genus of things, different from the metaphysical.[1] It is incumbent on man to investigate what is included in this genus: that is, the things that realize for man his objective through the intellectual principles that are in him, and by which he achieves that perfection that became known in natural science. It will become evident concomitantly that these rational principles are not mere *causes* by which man attains the perfection for which he is made. Moreover, he will know that these rational principles also supply many things to natural beings other than those supplied by nature. Indeed man

arrives at the ultimate perfection (whereby he attains that which renders him truly substantial) only when he labors with these principles toward achieving this perfection. Moreover, he cannot labor toward this perfection except by exploiting a large number of natural beings and until he manipulates them to render them useful to him for arriving at the ultimate perfection he should achieve.[2] Furthermore, it will become evident to him in this science that each man achieves only a portion of that perfection, and what he achieves of this portion varies in its extent, for an isolated individual cannot achieve all the perfections by himself and without the aid of many other individuals. It is the innate disposition of every man to join another human being or other men in the labor he ought to perform: this is the condition of every single man. Therefore, to achieve what he can of that perfection, every man needs to stay in the neighborhood of others and associate with them.[3] It is also the innate nature of this animal to seek shelter and to dwell in the neighborhood of those who belong to the same species, which is why he is called the *social* and *political* animal. There emerges now another science and another inquiry that investigates these intellectual principles and the acts and states of character with which man labors toward this perfection. From this, in turn, emerge the science of man and political science.[4]

19 He should begin to inquire into the metaphysical beings and, in treating them, use the methods he used in treating natural things. He should use as their principles of instruction the first premises that happen to be available and are appropriate to this genus, and in addition, the demonstrations of natural science that fit as principles of instruction in this genus. These should be arranged according to the order mentioned above,[1] until one covers every being in this genus. It will become evident to whoever investigates these beings that none of them can possess any material at all; one ought to investigate every one of them only as to (1) *what* and *how* it is, (2) *from what* agent and (4) *for what* it is. He should continue this investigation until he finally reaches a being that cannot possess any of these principles at all (either *what* it is or *from what* it is or *for what* it is) but is itself the first principle of all the aforementioned beings: it is itself that *by* which, *from* which, and *for* which they are, in the most

perfect modes in which a thing can be a principle for the beings, modes free from all defects. Having understood this, he should investigate next what properties the other beings possess as a consequence of their having *this* being as their principle and the cause of their being. He should begin with the being whose rank is higher than the rest (that is, the one nearest to the first principle), until he terminates in the being whose rank is inferior to the rest (that is, the one furthest from the first principle). He will thus come to know the ultimate causes of the beings. This is the divine[2] inquiry into them. For the first principle is the divinity, and the principles that come after it—and are not bodies or in bodies—are the divine principles.

20 Then he should set out next upon the science of man and investigate the *what* and the *how* of the purpose for which man is made, that is, the perfection that man must achieve. Then he should investigate all the things by which man achieves this perfection or that are useful to him in achieving it. These are the good, virtuous, and noble things. He should distinguish them from things that obstruct his achieving this perfection. These are the evils, the vices, and the base things.[1] He should make known *what* and *how* every one of them is, and *from what* and *for what* it is, until all of them become known, intelligible, and distinguished from each other. This is political science.[2] It consists of knowing the things by which the citizens of cities attain happiness through political association in the measure that innate disposition equips each of them for it. It will become evident to him that political association and the totality that results from the association of citizens in cities correspond to the association of the bodies that constitute the totality of the world. He will come to see in what are included in the totality constituted by the city and the nation the likenesses of what are included in the total world. Just as in the world there is a first principle, then other principles subordinate to it, beings that proceed from these principles, other beings subordinate to these beings, until they terminate in the beings with the lowest rank in the order of being, the nation or the city includes a supreme commander, followed by other commanders,[3] followed by other citizens, who in turn are followed by other citizens, until they terminate in the citizens with the lowest rank as citizens and

as human beings. Thus the city includes the likenesses of the things included in the total world.[4]

21 This, then, is theoretical perfection. As you see, it comprises knowledge of the four kinds of things by which the citizens of cities and nations attain supreme happiness. What still remains is that these four be realized and have actual existence in nations and cities while conforming to the account of them given by the theoretical sciences.[1]

ii

22 Do you suppose that these theoretical sciences have also given an account of the means by which these four can be actually realized in nations and cities, or not? They have indeed given an account of the latter as they are perceived by the intellect. Now if it were the case that to give an account of these things as they are perceived by the intellect is to give an account of their [actual] existence, it would follow that the theoretical sciences have given an account of them as actually existent. (For instance, if it were the case that giving an intelligible account of architecture and perceiving by the intellect what constitutes architecture and what constitutes a building make an architect of the man who has intellected what manner of thing the art of building is, or, if it were the case that giving an intelligible account of a building is to give an account of its actual existence, then the theoretical sciences do both.) But if it is not the case that the intellection of a thing implies its existence outside the intellect and that to give an intelligible account of it is to give an account of its actual existence, then, when one intends to make these four things exist, he necessarily requires something else beside theoretical science.[1]

23 That is because things perceived by the intellect are as such free from the states and accidents that they have when they exist outside the [thinking] soul. In what remains numerically one, these accidents do not vary or change at all; they do vary, however, in what remains one, not numerically, but in the species.[1] Therefore when it is necessary to make the things perceived by the intellect and remaining one in their species exist outside the

soul, one must join to them the states and accidents that must accompany them if they are to have actual existence outside the soul. This applies to the *natural* intelligibles, which are and remain one in their species, as well as to *voluntary* intelligibles.[2]

24 However, the natural intelligibles, which exist outside the soul, exist from nature only, and it is by nature that they are accompanied with their accidents.[1] As for the intelligibles that can be made to exist outside the soul by will, the accidents and states that accompany them when they come into being are willed too. Now voluntary intelligibles cannot exist unless they are accompanied with these accidents and states. Since everything whose existence is willed cannot be made to exist unless it is first known, it follows that when one plans to bring any voluntary intelligible into actual existence outside the soul, he must first know the states that must accompany it when it exists.[2] Because voluntary intelligibles do not belong to things that are one numerically, but in their species or genus, the accidents and states that must accompany them vary constantly, increase and decrease, and fall into combinations that cannot be covered at all by invariable and unchangeable formal rules. Indeed, for some of them no rule can be established. For others rules can be established, but they are variable rules and changeable definitions. Those for which no rule at all can be established are the ones that vary constantly and over short periods. The others, for which rules can be established, are those whose states vary over long periods. Those of them that come to exist are for the most part realized by the agency of whoever wills and does them. Yet because of obstacles standing in their way—some of which are natural and others voluntary, resulting from the wills of other individuals—sometimes none of them at all is realized. Furthermore, they suffer not only *temporal* variations, so that they may exist at a certain time with accidents and states different from those that accompany them at another time before or after; their states also differ when they exist in different *places*. This is evident in natural things, e.g., Man. For when it [that is, the intelligible idea Man] assumes actual existence outside the soul, the states and accidents in it at one time are different from those it has at another time after or before. The same is the case with respect to different places. The accidents and states it has when

existing in one country are different from those it has in another. Yet, throughout, the intellect perceives Man as a single intelligible idea.[3] This holds for voluntary things as well. For instance, Moderation, Wealth, and the like are voluntary ideas perceived by the intellect. When we decide to make them actually exist, the accidents that must accompany them at a certain time will be different from the accidents that must accompany them at another time, and the accidents they must have when they exist in one nation will be different from those they must have when existing in another. In some of them, these accidents change from hour to hour, in others from day to day, in others from month to month, in others from year to year, in others from decade to decade, and in still others they change after many decades. Therefore, whoever should will to bring any of them into actual existence outside the soul ought to know the variable accidents that must accompany it in the specific period at which he seeks to bring it into existence and in the determined place in the inhabited part of the earth. Thus he ought to know the accidents that must accompany what is willed to exist from hour to hour, from month to month, from year to year, from decade to decade, or in some other period of determinate length, in a determined locality of large or small size. And he ought to know which of these accidents are common to all nations, to some nations, or to one city over a long period, common to them over a short period, or pertain to some of them specifically and over a short period.

25 The accidents and states of these intelligibles vary whenever certain events occur in the inhabited part of the earth, events common to all of it, to a certain nation or city, or to a certain group within a city, or pertaining to a single man. Such events are either natural or willed.

26 Things of this sort are not covered by the theoretical sciences, which cover only the intelligibles that do not vary at all.[1] Therefore another faculty and another skill is required with which to discern the voluntary intelligibles, [not as such, but] insofar as they possess these variable accidents: that is, the modes according to which they can be brought into actual existence by the will at a determined time, in a determined place, and when a determined event occurs. That is the *deliberative* faculty.[2] It is the skill and

the faculty by which one discovers and discerns the variable accidents of the intelligibles whose particular instances are made to exist by the will, when one attempts to bring them into actual existence by the will at a determined time, in a determined place, and when a determined event takes place, whether the time is long or short, whether the locality is large or small.

27 Things are *discovered* by the deliberative faculty only insofar as they are found to be useful for the attainment of an end and purpose.[1] The discoverer first sets the end before himself and then investigates the means by which that end and that purpose are realized. The deliberative faculty is most perfect when it discovers what is most useful for the attainment of these ends. The ends may be truly good, may be evil, or may be only believed to be good.[2] If the means discovered are the most useful for a virtuous end, then they are noble and fair. If the ends are evil, then the means discovered by the deliberative faculty are also evil, base, and bad. And if the ends are only believed to be good, then the means useful for attaining and achieving them are also only believed to be good. The deliberative faculty can be classified accordingly. Deliberative *virtue* is that by which one discovers what is most useful for some virtuous end. As for the deliberative faculty by which one discovers what is most useful for an evil end, it is not a deliberative *virtue* but ought to have other names.[3] And if the deliberative faculty is used to discover what is most useful for things that are only believed to be good, then that deliberative faculty is only believed to be a deliberative virtue.

28 (1) There is a certain deliberative virtue that enables one to excel in the discovery of what is most useful for a virtuous end common to many nations, to a whole nation, or to a whole city, at a time when an event occurs that affects them in common.[1] (There is no difference between saying *most useful for a virtuous end* and *most useful and most noble,* because what is both most useful and most noble necessarily serves a virtuous end, and what is most useful for a virtuous end is indeed the most noble with respect to that end.) This is *political* deliberative virtue. The events that affect them in common may persist over a long period or vary within short periods. However, *political* deliberative virtue is the deliberative virtue that discovers the most useful and most

noble that is common to many nations, to a whole nation, or to a whole city, irrespective of whether what is discovered persists there for a long period or varies over a short period. When it is concerned exclusively with the discovery of the things that are common to many nations, to a whole nation, or to a whole city, and that do not vary except over many decades or over longer periods of determinate length, then it is more akin to a legislative ability.[2] (2) The deliberative virtue with which one discovers only what varies over short periods. This is the faculty that manages the different classes of particular, temporary tasks in conjunction with, and at the occurrence of, the events that affect all nations, a certain nation, or a certain city. It is subordinate to the former.[3] (3) The faculty by which one discovers what is most useful and noble, or what is most useful for a virtuous end, relative to one group among the citizens of a city or to the members of a household. It consists of a variety of deliberative virtues, each associated with the group in question: for instance, it is *economic* deliberative virtue or *military* deliberative virtue. Each of these, in turn, is subdivided inasmuch as what it discovers (*a*) does not vary except over long periods or (*b*) varies over short periods. (4) The deliberative virtue may be subdivided into still smaller fractions, such as the virtue by which one discovers what is most useful and noble with respect to the purpose of particular arts or with respect to particular purposes that happen to be pursued at particular times. Thus it will have as many subdivisions as there are arts and ways of life. (5) Furthermore, this faculty can be divided also insofar as (*a*) it enables man to excel in the discovery of what is most useful and noble with respect to his own end when an event occurs that concerns him specifically, and (*b*) it is a deliberative virtue by which he discovers what is most useful and noble with respect to a virtuous end to be attained by somebody else—the latter is *consultative* deliberative virtue.[4] These two may be united in a single man or may exist separately.

29 It is obvious that the one who possesses a virtue by which he discovers what is most useful and noble, and this for the sake of a virtuous end that is good (irrespective of whether what is discovered is a true good that he wishes for himself, a true good that he wishes someone else to possess, or something that is

believed to be good by whomever he wishes it for), cannot possess this faculty without possessing a moral virtue.[1] For if a man wishes the good for others, then he is either truly good or else believed to be good by those for whom he wishes the good although he is not good and virtuous. Similarly he who wishes the true good for himself has to be good and virtuous, not in his deliberation, but in his moral character and in his acts. It would seem that his virtue, moral character, and acts, have to correspond to his power of deliberation and ability to discover what is most useful and noble. Hence if he discovers by his deliberative virtue only those most useful and noble means that are of great force (such as what is most useful for a virtuous end common to a whole nation, to many nations, or to a whole city, and does not vary except over a long period), then his moral virtues ought to be of a comparable measure. Similarly, if his deliberative virtues are confined to means that are most useful for a restricted end when a specific event occurs, then this is the measure of his [moral] virtue also. Accordingly, the more perfect the authority and the greater the power of these deliberative virtues, the stronger the authority and the greater the power of the moral virtues that accompany them.

30 (1) Since the deliberative virtue by which one discovers what is most useful and noble with respect to the ends that do not vary except over long periods and that are common to many nations, to a whole nation, or to a whole city when an event that affects them in common occurs, has more perfect authority and greater power, the [moral] virtues that accompany it should possess the most perfect authority and the greatest power. (2) Next follows the deliberative virtue with which one excels in the discovery of what is most useful for a common, though temporary, end, over short periods; the [moral] virtues that accompany it are of a comparable rank. (3) Then follow the deliberative virtues confined to individual parts of the city—the warriors, the rich, and so forth; the moral virtues that have to do with these parts are of a comparable rank. (4) Finally, one comes to the deliberative virtues related to single arts (taking into account the purposes of these arts) and to single households and single human beings within single households (with attention to what pertains to them as events follow one another hour after hour or day after day);

they are accompanied by a [moral] virtue of a comparable rank.

31 Therefore one ought to investigate which virtue is the perfect and most powerful virtue.[1] Is it the combination of all the virtues?; or, if one virtue (or a number of virtues) turns out to have a power equal to that of all the virtues together, what ought to be the distinctive mark of the virtue that has this power and is hence the most powerful virtue? This virtue is such that when a man decides to fulfill its functions, he cannot do so without making use of the functions of all the other virtues. If he himself does not happen to possess all of these virtues—in which case he cannot make use of the functions of particular virtues present in him when he decides to fulfill the functions of that virtue—that virtue of his will be a moral virtue in the exercise of which he exploits the acts of the virtues possessed by all others, whether they are nations, cities within a nation, groups within a city, or parts within each group. This, then, is the leading virtue that is not surpassed by any other in authority. Next follow the virtues that resemble this one in that they have a similar power with respect to single parts of the city. For instance, together with the deliberative faculty by which he discovers what is most useful and noble with respect to that which is common to warriors, the general ought to possess a moral virtue. When he decides to fulfill the functions of the latter, he exploits the virtues possessed by the warriors as warriors. His courage, for instance, ought to be such as to enable him to exploit the warriors' particular acts of courage. Similarly, the one who possesses a deliberative virtue by which he discovers what is most useful and noble for the ends of those who acquire wealth in the city ought to possess the moral virtue that enables him to exploit the particular virtues of the classes of people engaged in acquiring wealth.

32 The arts, too, ought to follow this pattern. The leading art that is not surpassed by any other in authority is such that when we decide to fulfill its functions, we are unable to do so without making use of the functions of all the arts. It is the art for the fulfillment of whose purpose we require all the other arts. This, then, is the leading art and the most powerful of the arts—just as the corresponding moral virtue was the most powerful of all the moral virtues. It is then followed by the rest of the arts. An art of a

certain class among them is more perfect and more powerful than the rest in its class if its end can be fulfilled only by making use of the functions of the other arts in its class. Such is the status of the *particular* leading arts. For instance, the art of commanding armies is such that its purpose can be achieved only by making use of the functions of the particular arts of warfare. Similarly, the leading art of wealth in the city is such that its purpose with regard to wealth can be achieved only by exploiting the particular arts of acquiring wealth. This is the case also in every other major part of the city. **26**

33 Furthermore, it is obvious that what is most useful and noble is in every case either most noble according to generally accepted[1] opinion, most noble according to a particular religion,[2] or truly most noble. Similarly, virtuous ends are either virtuous and good according to generally accepted opinion, virtuous and good according to a particular religion, or truly virtuous and good. No one can discover what is most noble according to the followers of a particular religion unless his moral virtues are the specific virtues of that religion. This holds for everyone else;[3] it applies to the more powerful virtues as well as to the more particular and less powerful. Therefore the most powerful deliberative virtue and the most powerful moral virtue are inseparable from each other.

34 It is evident that the deliberative virtue with the highest authority can only be subordinate to the theoretical virtue; for it merely discerns the accidents of the intelligibles that, prior to having these accidents as their accompaniments, are acquired by the theoretical virtue.[1] If it is determined that the one who possesses the deliberative virtue should discover the variable accidents and states of only those intelligibles of which he has personal insight and personal knowledge (so as not to make discoveries about things that perhaps ought not to take place), then the deliberative virtue cannot be separated from the theoretical virtue. It follows that the theoretical virtue, the leading deliberative virtue, the leading moral virtue, and the leading practical art are inseparable from each other; otherwise the latter [three] will be unsound, imperfect, and without complete authority.

35 But if, after the theoretical virtue has caused the intellect to perceive the moral virtues, the latter can only be made to exist **27**

if the deliberative virtue discerns them and discovers the accidents that must accompany their intelligibles so that they can be brought into existence, then the deliberative virtue is anterior to the moral virtues. If it is anterior to them, then he who possesses the deliberative virtue discovers by it only such moral virtues as exist independently of the deliberative virtues. Yet if the deliberative virtue is independent of the moral virtue, then he who has the capacity for discovering the (good) moral virtues will not himself be good, not even in a single virtue.[1] But if he himself is not good, how then does he seek out the good or wish the true good for himself or for others? And if he does not wish the good, how is he capable of discovering it without having set it before himself as an end? Therefore, if the deliberative virtue is independent of the moral virtue, it is not possible to discover the moral virtue with it. Yet if the moral virtue is inseparable from the deliberative, and they coexist, how could the deliberative virtue discover the moral and join itself to it? For if they are inseparable, it will follow that the deliberative virtue did not discover the moral virtue; while if the deliberative virtue did discover the moral virtue, it will follow that the deliberative virtue is independent of the moral virtue. Therefore either the deliberative virtue itself is the virtue of goodness, or one should assume that the deliberative virtue is accompanied by some other virtue, different from the moral virtue that is discovered by the deliberative faculty. If that other moral virtue is formed by the will also, it follows that the deliberative virtue discovered it—thus the original doubt recurs. It follows, then, that there must be some other moral virtue—other, that is, than the one discovered by the deliberative virtue—which accompanies the deliberative virtue and enables the possessor of the deliberative virtue to wish the good and the virtuous end. *That* virtue must be *natural* and must come into being by nature, and it must be coupled with a certain deliberative virtue [that is, *cleverness*] which comes into being by nature and discovers the moral virtues formed by the will. The virtue formed by the will will then be the *human*[2] virtue by which man, after acquiring it in the way in which he acquires voluntary things, acquires the *human* deliberative virtue.[3] **28**

36 But one ought to inquire what manner of thing that *natural* virtue is. Is it or is it not identical with this voluntary

virtue? Or ought one to say that it *corresponds* to this virtue, like the states of character that exist in irrational animals?—just as it is said that courage resides in the lion, cunning in the fox, shiftiness in the bear, thievishness in the magpie, and so on. For it is possible that every man is innately so disposed that his soul has a power such that he generally moves more easily in the direction of the accomplishment of a certain virtue or of a certain state of character than in the direction of doing the opposite act. Indeed man moves first in the direction in which it is easier for him to move, provided he is not compelled to do something else. For instance, if a man is innately so disposed that he is more prone to stand his ground against dangers than to recoil before them, then all he needs is to undergo the experience a sufficient number of times and this state of character becomes voluntary. Prior to this, he possessed the corresponding *natural* state of character.[1] If this is so in particular moral virtues that accompany particular deliberative virtues, it must also be the case with the highest moral virtues that accompany the highest deliberative virtues. If this is so, it follows that there are some men who are innately disposed to a [*natural* moral] virtue that corresponds to the highest [*human* moral] virtue[2] and that is joined to a naturally superior deliberative power, others just below them, and so on. If this is so, then not every chance human being will possess art, moral virtue, and deliberative virtue with great power.

37 Therefore the prince occupies his place by nature and not merely by will.[1] Similarly, a subordinate occupies his place primarily by nature and only secondarily by virtue of the will, which perfects his natural equipments. This being the case, the theoretical virtue, the highest deliberative virtue, the highest moral virtue, and the highest practical art are realized in those equipped for them by nature: that is, in those who possess superior natures with very great potentialities.[2]

iii

38 After these four things are realized in a certain man, the realization of the particular instances[1] of them in nations and

cities still remains; his knowing how to make these particular instances exist in nations and cities remains: he who possesses such a great power ought to possess the capacity of realizing the particular instances of it in nations and cities.

39 There are two primary methods of realizing them: instruction and the formation of character.[1] To instruct is to introduce the theoretical virtues in nations and cities. The formation of character is the method of introducing the moral virtues and practical arts in nations. Instruction proceeds by speech alone. The formation of character proceeds through habituating nations and citizens in doing the acts that issue from the practical states of character by arousing in them the resolution to do these acts; the states of character and the acts issuing from them should come to possess their souls, and they should be as it were enraptured by them.[2] The resolution to do a thing may be aroused by speech or by deed.

40 Instruction in the theoretical sciences should be given either to the *imams*[1] and the princes, or else to those who should preserve the theoretical sciences. The instruction of these two groups proceeds by means of identical approaches. These are the approaches stated above.[2] First, they should know the first premises and the primary knowledge relative to every kind of theoretical science. Then they should know the various states of the premises and their various arrangements as stated before, and be made to pursue the subjects that were mentioned.[3] (Prior to this, their souls must have been set aright through the training befitting the youths whose natures entitle them to this rank in the order of humanity.) They should be habituated to use all the logical methods in all the theoretical sciences. And they should be made to pursue a course of study and form the habits of character from their childhood until each of them reaches maturity, in accordance with the plan described by Plato.[4] Then the princes among them will be placed in subordinate offices and promoted gradually through the ranks until they are fifty years old. Then they will be placed in the office with the highest authority. This, then, is the way to instruct this group; they are the elect who should not be confined to what is in conformity with unexamined common opinion.[5] Until they acquire the theoretical virtues, they ought to

be instructed in things theoretical by means of persuasive methods. They should comprehend[6] many theoretical things by way of imagining them. These are the things—the ultimate principles and the incorporeal principles—that a man cannot perceive by his intellect except after knowing many other things. The vulgar ought to comprehend merely the similitudes of these principles, which should be established in their souls by persuasive arguments. One should draw a distinction between the similitudes that ought to be presented to every nation, and in which all nations and all the citizens of every city should share, and the ones that ought to be presented to a particular nation and not to another, to a particular city and not to another, or to a particular group among the citizens of a city and not to another. All these [persuasive arguments and similitudes] must be discerned by the deliberative virtue.

41 They [the princes and the *imams*] should be habituated in the acts of the practical[1] virtues and the practical arts by either of two methods. First, by means of persuasive arguments, passionate arguments, and other arguments that establish these acts and states of character in the soul completely so as to arouse the resolution to do the acts willingly. This method is made possible by the practice of the rational arts—to which the mind is naturally inclined—and by the benefits derived from such practice. The other method is compulsion.[2] It is used with the recalcitrant and the obstinate among those citizens of cities and nations who do not rise in favor of what is right willingly and of their own accord or by means of arguments, and also with those who refuse to teach others the theoretical sciences in which they are engaged.

42 Now since the virtue or the art of the prince is exercised by exploiting the acts of those who possess the particular virtues and the arts of those who practice the particular arts, it follows necessarily that the virtuous and the masters of the arts whom he [the prince] employs to form the character of nations and citizens of cities comprise two primary groups: a group employed by him to form the character of whosoever is susceptible of having his character formed willingly, and a group employed by him to form the character of those who are such that their character can be formed only by compulsion. This is analogous to what heads of households and superintendents of children and youths do.[1] For the prince forms the character of nations and instructs them, just as the head of a household forms the character of its members and instructs them, and the superintendent of children and youths forms their character and instructs them. Just as each of the latter two forms the character of some of those who are in his custody by being gentle to them and by persuasion and forms the character of others by compulsion, so does the prince. Indeed it is in virtue of the very same skill that the classes of men who form the character of others and superintend them undertake both the compulsory formation of character and the formation of character received willingly; the skill varies only with respect to its degree and the extent of its power.[2] Thus the power required for forming the character of nations and for superintending them is greater than the power required for forming the character of children and youths or the power required by heads of households for forming the character of the members of a household. Correspondingly, the power of the princes who are the superintendents of nations and cities and who form their character, and the power of whomever and whatever they employ in performing this function, are greater. The prince needs the most powerful skill for forming the character of others with their consent and the most powerful skill for forming their character by compulsion.

43 The latter is the craft of war: that is, the faculty that enables him to excel in organizing and leading armies and utilizing war implements and warlike people to conquer the nations and cities that do not submit to doing what will procure them that happiness for whose acquisition man is made. For every being is made to achieve the ultimate perfection it is susceptible of achieving according to its specific place in the order of being. Man's specific perfection is called *supreme happiness*;[1] and to each man, according to his rank in the order of humanity, belongs the specific supreme happiness pertaining to his kind of man.[2] The warrior who pursues this purpose is the just warrior, and the art of war that pursues this purpose is the just and virtuous art of war.[3]

44 The other group, employed to form the character of nations and the citizens of cities with their consent, is composed of those who possess the rational virtues and arts. For it is obvious that the prince needs to return to the theoretical, intelligible things

whose knowledge was acquired by certain demonstrations, look for the persuasive methods that can be employed for each, and seek out all the persuasive methods that can be employed for it (he can do this because he possesses the power to be persuasive about individual cases). Then he should repair to these very same theoretical things and seize upon their similitudes. He ought to make these similitudes produce images of the theoretical things for all nations jointly, so establish the similitudes that persuasive methods can cause them to be accepted, and exert himself throughout to make both the similitudes and the persuasive methods such that all nations and cities may share in them. Next he needs to enumerate the acts of the particular practical virtues and arts that fulfill the above-mentioned requirements.[1] He should devise methods of political oratory with which to arouse the resolution to such acts in nations and cities. He should employ here (1) arguments that support [the rightness of] his own character; (2) passionate and moral arguments that cause (*a*) the souls of the citizens to grow reverent, submissive, muted, and meek. But with respect to everything contrary to these acts he should employ passionate and moral arguments by which (*b*) the souls of the citizens grow confident, spiteful, insolent, and contemptuous. He should employ these same two kinds of arguments [*a* and *b*], respectively, with the princes who agree with him and with those who oppose him, with the men and the auxiliaries employed by him and with the ones employed by those who oppose him, and with the virtuous and with those who oppose them. Thus with respect to his own position he should employ arguments by which souls grow reverent and submissive. But with respect to his opponents he should employ arguments that cause souls to grow spiteful, insolent, and contemptuous; arguments with which he contradicts, using persuasive methods, those who disagree with his own opinions and acts; and arguments that show the opinions and acts of the opponent as base and make their meanness and notoriety apparent.[2] **34** He should employ here both classes of arguments: I mean the class that should be employed periodically, daily, and temporarily, and not preserved, kept permanently, or written down; and the other class, which should be preserved and kept permanently, orally and in writing. [The latter should be kept in two Books, a

Book of Opinions and a Book of Acts.] He should place in these two Books the opinions and the acts that nations and cities were called upon to embrace, the arguments by which he sought to preserve among them and to establish in them the things they were called upon to embrace so that they will not be forgotten, and the arguments with which he contradicts the opponents of these opinions and acts. Therefore the sciences that form the character of nations and cities will have three ranks of order [the first belongs to the sciences contained in the Book of Opinions, the second to the sciences contained in the Book of Acts, and the third to the unwritten sciences]. Each kind will have a group to preserve it, who should be drawn from among those who possess the faculty that enables them to excel in the discovery of what had not been clearly stated to them with reference to the science they preserve, to defend it, to contradict what contradicts it, and to excel in teaching all of this to others. In all of this they should aim at accomplishing the purpose of the supreme ruler with respect to nations and cities.[3]

45 Then he [the supreme ruler] should inquire next into the different classes of nations by inquiring into every nation and into the human states of character and the acts for which all nations are equipped by that nature which is common to them, until he comes to inquire into all or most nations. He should inquire into that in which all nations share—that is, the *human nature* common to them—and then into all the things that pertain specifically to every group within every nation.[1] He should discern all of these, draw up an actual—if approximate—list of the acts and the states of character with which every nation can be set aright and guided toward happiness, and specify the classes of persuasive argument (regarding both the theoretical and the practical virtues) that ought to be employed among them.[2] He will thus set down what every nation is capable of, having subdivided every nation and inquired whether or not there is a group fit for preserving the theoretical sciences and others who can preserve the popular theoretical sciences or the image-making theoretical sciences.[3] **35**

46 Provided all of these groups exist in nations, four sciences will emerge. First, the theoretical virtue through which the beings become intelligible with certain demonstrations. Next, these same

intelligibles acquired by persuasive methods. Subsequently, the science that comprises the similitudes of these intelligibles, accepted by persuasive methods. Finally, the sciences extracted from these three for each nation. There will be as many of these extracted sciences as there are nations, each containing everything by which a particular nation becomes perfect and happy.

47 Therefore he [the supreme ruler] has to find certain groups of men or certain individuals who are to be instructed in what causes the happiness of particular nations, who will preserve what can form the character of a particular nation alone, and who will learn the persuasive methods that should be employed in forming the character of that nation. The knowledge which that nation ought to have must be preserved by a man or a group of men also possessing the faculty that enables them to excel in the discovery of what was not actually given to this man or this group of men but is, nevertheless, of the same kind for which they act as custodians, enables them to defend it and contradict what opposes it, and to excel in the instruction of that nation.[1] In all of this they should aim at accomplishing what the supreme ruler had in mind for the nation, for whose sake he gave this man or this group of men what was given to them. Such are the men who should be employed to form the character of nations with their consent.

48 The best course is that each member of the groups to which the formation of the character of nations is delegated should possess a warlike virtue and a deliberative virtue for use in case there is need to excel in leading troops in war; thus everyone of them will possess the skill to form the nations' character by both methods. If this combination does not happen to exist in one man, then he [the supreme ruler] should add to the man who forms the character of nations with their consent another who possesses this craft of war. In turn, the one to whom the formation of the character of any nation is delegated should also follow the custom of employing a group of men to form the character of the nation with its consent or by compulsion, by either dividing them into two groups or employing a single group that possesses a skill for doing both. Subsequently, this one group, or the two groups, should be subdivided, and so on, ending in the lowest divisions or the ones with the least power in the formation of character. The ranks

within these groups should be established according to the deliberative virtue of each individual: that is, depending on whether his deliberative virtue exploits subordinate ones or is exploited by one superior to it. The former will rule and the latter have a subordinate office according to the power of their respective deliberative virtues.[1] When these two groups are formed in any nation or city, they, in turn, will order the rest.

49 These, then, are the modes and the methods through which the four human things by which supreme happiness is achieved are realized in nations and cities.

iv

50 Foremost among all of these [four] sciences[1] is that which gives an account of the beings as they are perceived by the intellect with certain demonstrations. The others merely take these same beings and employ persuasion about them or represent them with images so as to facilitate the instruction of the multitude of the nations and the citizens of cities. That is because nations and the citizens of cities are composed of some who are the elect and others who are the vulgar. The vulgar confine themselves, or should be confined, to theoretical cognitions that are in conformity with unexamined common opinion.[2] The elect do not confine themselves in any of their theoretical cognitions to what is in conformity with unexamined common opinion but reach their conviction and knowledge on the basis of premises subjected to thorough scrutiny. Therefore whoever thinks that he is not confined to what is in conformity with unexamined common opinion in his inquiries, believes that in them he is of the "elect" and that everybody else is vulgar. Hence the competent practitioner of every art comes to be called one of the "elect" because people know that he does not confine himself, with respect to the objects of his art, to what is in conformity with unexamined common opinion, but exhausts them and scrutinizes them thoroughly. Again, whoever does not hold a political office or does not possess an art that establishes his claim to a political office, but either possesses no art at all or is enabled

by his art to hold only a subordinate office in the city, is said to be "vulgar"; and whoever holds a political office or else possesses an art that enables him to aspire to a political office is of the "elect." Therefore, whoever thinks that he possesses an art that qualifies him for assuming a political office or thinks that his position has the same status as a political office (for instance, men with prominent ancestors and many who possess great wealth), calls himself one of the "elect" and a "statesman."

51 Whoever has a more perfect mastery of the art that qualifies him for assuming an office is more appropriate for inclusion among the elect. Therefore it follows that the most elect of the elect is the supreme ruler. It would appear that this is so because he is the one who does not confine himself in anything at all to what is in conformity with unexamined common opinion. He must hold the office of the supreme ruler and be the most elect of the elect because of his state of character and skill. As for the one who assumes a political office with the intention of accomplishing the purpose of the supreme ruler, he *adheres* to thoroughly scrutinized opinions. However, the opinions that caused him to become an adherent[1] or because of which he was convinced that he should use his art to serve the supreme ruler were based on mere conformity to unexamined common opinions; he conforms to unexamined common opinion in his theoretical cognitions as well. The result is that the supreme ruler and he who possesses the science that encompasses the intelligibles with certain demonstrations belong to the elect. The rest are the vulgar and the multitude. Thus the methods of persuasion and imaginative representation are employed only in the instruction of the vulgar and the multitude of the nations and the cities, while the certain demonstrative methods, by which the beings themselves are made intelligible, are employed in the instruction of those who belong to the elect.

52 This is the superior science and the one with the most perfect [claim to rule or to] authority. The rest of the authoritative sciences are subordinate to this science. By *the rest of the authoritative sciences* I mean the second and the third, and that which is derived from them,[1] since these sciences merely follow the example of that science and are employed to accomplish the purpose of

that science, which is supreme happiness and the final perfection to be achieved by man.[2]

53 It is said that this science existed anciently among the Chaldeans,[1] who are the people of al-ʿIrāq,[2] subsequently reaching the people of Egypt,[3] from there transmitted to the Greeks, where it remained until it was transmitted to the Syrians[4] and then to the Arabs. Everything comprised by this science was expounded in the Greek language, later in Syriac, and finally in Arabic. The Greeks who possessed this science used to call it *true wisdom* and the *highest wisdom*. They called the acquisition of it *science*, and the scientific state of mind *philosophy* (by which they meant the quest and the love for the highest wisdom). They held that potentially it subsumes all the virtues. They called it the *science of sciences*, the *mother of sciences*, the *wisdom of wisdoms*, and the *art of arts* (they meant the art that makes use of all the arts, the virtue that makes use of all the virtues, and the wisdom that makes use of all wisdoms). Now "wisdom" may be used for consummate and extreme competence in any art whatsoever when it leads to performing feats of which most practitioners of that art are incapable.[5] Here wisdom is used in a qualified sense.[6] Thus he who is extremely competent in an art is said to be "wise" in that art. Similarly, a man with penetrating practical judgment and acumen may be called "wise" in the thing regarding which he has penetrating practical judgment. However, *true* wisdom is this science and state of mind alone.[7]

54 When the theoretical sciences are isolated and their possessor does not have the faculty for exploiting them for the benefit of others, they are defective philosophy.[1] To be a truly perfect philosopher one has to possess both the theoretical sciences and the faculty for exploiting them for the benefit of all others according to their capacity. Were one to consider the case of the true philosopher, he would find no difference between him and the supreme ruler. For he who possesses the faculty for exploiting what is comprised by the theoretical matters for the benefit of all others possesses the faculty for making such matters intelligible as well as for bringing into actual existence those of them that depend on the will. The greater his power to do the latter, the more perfect is his philosophy. Therefore he who is truly perfect possesses

with sure insight, first, the theoretical virtues, and subsequently the practical.[2] Moreover, he possesses the capacity for bringing them about in nations and cities in the manner and the measure possible with reference to each. Since it is impossible for him to possess the faculty for bringing them about except by employing certain demonstrations, persuasive methods, as well as methods **40** that represent things through images, and this either with the consent of others or by compulsion, it follows that the true philosopher is himself the supreme ruler.

55 Every instruction is composed of two things: (*a*) making what is being studied comprehensible[1] and causing its idea to be established in the soul and (*b*) causing others to assent[1] to what is comprehended and established in the soul. There are two ways 5 of making a thing comprehensible: first, by causing its essence to be perceived by the intellect, and second, by causing it to be imagined through the similitude that imitates it. Assent, too, is brought about by one of two methods, either the method of certain demonstration or the method of persuasion. Now when one acquires knowledge of the beings or receives instruction in them, if he perceives their ideas themselves with his intellect, and his assent to them is by means of certain demonstration, then the science that comprises these cognitions is *philosophy*. But if they are known by imagining them through similitudes that imitate 10 them, and assent to what is imagined of them is caused by persuasive methods, then the ancients call what comprises these cognitions *religion*.[2] And if those intelligibles themselves are adopted, and *persuasive* methods are used, then the religion comprising them is called *popular, generally accepted,* and *external* philosophy.[3] Therefore, according to the ancients, religion is an imitation of philosophy.[4] Both comprise the same subjects and both give an account of the ultimate principles of the beings. For 15 both supply knowledge about the first principle and cause of the beings, and both give an account of the ultimate end for the sake of which man is made—that is, supreme happiness—and the ultimate end of every one of the other beings. In everything of which philosophy gives an account based on intellectual perception or conception, religion gives an account based on imagination. In everything demonstrated by philosophy, religion employs per-

suasion. Philosophy gives an account of the ultimate principles (that is, the essence of the first principle and the essences of the incorporeal second principles[5]), as they are perceived by the **41** intellect. Religion sets forth their images by means of similitudes of them taken from corporeal principles and imitates them by their likenesses among political offices.[6] It imitates the divine acts by means of the functions of political offices.[6] It imitates the actions of natural powers and principles by their likenesses among the faculties, states, and arts that have to do with the will, just as Plato does in the *Timaeus*.[7] It imitates the intelligibles by their 5 likenesses among the sensibles: for instance, some imitate *matter* by *abyss* or *darkness* or *water*, and *nothingness* by *darkness*. It imitates the classes of supreme happiness—that is, the ends of the acts of the human virtues—by their likenesses among the goods that are believed to be the ends. It imitates the classes of true happiness by means of the ones that are believed to be happiness. It imitates the ranks of the beings by their likenesses among 10 spatial and temporal ranks. And it attempts to bring the similitudes of these things as close as possible to their essences.[8] Also, in everything of which philosophy gives an account that is demonstrative and certain, religion gives an account based on persuasive arguments. Finally, philosophy is prior to religion in time.

56 Again, it is evident that when one seeks to bring into actual existence the intelligibles of the things depending on the will supplied by practical philosophy,[1] he ought to prescribe the conditions that render possible their actual existence.[2] Once the 15 conditions that render their actual existence possible are prescribed, the voluntary intelligibles are embodied in laws.[3] Therefore the legislator is he who, by the excellence of his deliberation, has the capacity to find the conditions required for the actual existence of voluntary intelligibles in such a way as to lead to the achievement of supreme happiness. It is also evident that only after perceiving them by his intellect should the legislator seek to discover their conditions, and he cannot find their conditions that **42** enable him to guide others toward supreme happiness without having perceived supreme happiness with his intellect.[4] Nor can these things become intelligible (and the legislative craft thereby hold the supreme office) without his having beforehand acquired

philosophy. Therefore, if he intends to possess a craft that is authoritative rather than subservient, the legislator must be a philosopher. Similarly, if the philosopher who has acquired the theoretical virtues does not have the capacity for bringing them about in all others according to their capacities, then what he has acquired from them has no validity. Yet he cannot find the states and the conditions by which the voluntary intelligibles assume actual existence,[5] if he does not possess the deliberative virtue; and the deliberative virtue cannot exist in him without the practical[6] virtue. Moreover, he cannot bring them about in all others according to their capacities except by a faculty that enables him to excel in persuasion and in representing things through images.

57 It follows, then, that the idea of *Imam,* Philosopher, and Legislator is a single idea.[1] However, the name *philosopher* signifies primarily theoretical virtue. But if it be determined that the theoretical virtue reach its ultimate perfection in every respect, it follows necessarily that he must possess all the other faculties as well.[2] *Legislator* signifies excellence of knowledge concerning the conditions of practical[3] intelligibles, the faculty for finding them, and the faculty for bringing them about in nations and cities. When it is determined that they be brought into existence on the basis of knowledge, it will follow that the theoretical virtue must precede the others—the existence of the inferior presupposes the existence of the higher.[4] The name *prince* signifies sovereignty and ability. To be completely able, one has to possess the power of the greatest ability. His ability to do a thing must not result only from external things; he himself must possess great ability because his art, skill, and virtue are of exceedingly great power. This is not possible except by great power of knowledge, great power of deliberation, and great power of [moral] virtue and art. Otherwise he is not truly able nor sovereign. For if his ability stops short of this, it is still imperfect. Similarly, if his ability is restricted to goods inferior to supreme happiness, his ability is incomplete and he is not perfect. Therefore the true prince is the same as the philosopher-legislator. As to the idea of *Imam* in the Arabic language, it signifies merely the one whose example is followed and who is well received: that is, either his perfection is well received or his purpose is well received. If he is not well received in all the

infinite activities, virtues, and arts, then he is not truly well received. Only when all other arts, virtues, and activities seek to realize *his* purpose and no other, will his art be the most powerful art, his [moral] virtue the most powerful virtue, his deliberation the most powerful deliberation, and his science the most powerful science. For with all of these powers he will be exploiting the powers of others so as to accomplish his own purpose.[5] This is not possible without the theoretical sciences, without the greatest of all deliberative virtues, and without the rest of those things that are in the philosopher.[6]

58 So let it be clear to you that the idea of the Philosopher, Supreme Ruler, Prince, Legislator, and *Imam* is but a single idea. No matter which one of these words[1] you take, if you proceed to look at what each of them signifies among the majority of those who speak our language, you will find that they all finally agree by signifying one and the same idea.

59 Once the images representing the theoretical things[1] demonstrated in the theoretical sciences are produced in the souls of the multitude and they are made to assent to their images, and once the practical[2] things (together with the conditions of the possibility of their existence) take hold of their souls and dominate them so that they are unable to resolve to do anything else, then the theoretical and practical things are realized. Now these things are *philosophy* when they are in the soul of the legislator. They the *religion* when they are in the souls of the multitude. For when the legislator knows these things, they are evident to him by sure insight, whereas what is established in the souls of the multitude is through an image and a persuasive argument. Although it is the legislator who also represents these things through images, neither the images nor the persuasive arguments are intended for himself. As far as he is concerned, they are certain. He is the one who invents the images and the persuasive arguments, but not for the sake of establishing these things in his own soul as a religion for himself. No, the images and the persuasive arguments are intended for others, whereas, so far as he is concerned, these things are certain. They are a religion for others, whereas, so far as he is concerned, they are philosophy.[3] Such, then, is true philosophy and the true philosopher.

60 As for mutilated philosophy: the counterfeit philosopher, the vain philosopher, or the false philosopher is the one who sets out to study the sciences without being prepared for them. For he who sets out to inquire ought to be innately equipped for the theoretical sciences—that is, fulfill the conditions prescribed by Plato in the *Republic*:[1] he should excel in comprehending and conceiving that which is essential. Moreover, he should have good memory and be able to endure the toil of study. He should love truthfulness and truthful people, and justice and just people; and not be headstrong or a wrangler about what he desires. He should not be gluttonous for food and drink, and should by natural disposition disdain the appetites, the *dirhem,* the *dinar,* and the like. He should be high-minded and avoid what is disgraceful in people. He should be pious, yield easily to goodness and justice, and be stubborn in yielding to evil and injustice. And he should be strongly determined in favor of the right thing. Moreover, he should be brought up according to laws and habits that resemble his innate disposition. He should have sound conviction about the opinions of the religion in which he is reared, hold fast to the virtuous acts in his religion, and not forsake all or most of them. Furthermore, he should hold fast to the generally accepted virtues and not forsake the generally accepted noble acts.[2] For if a youth is such, and then sets out to study philosophy and learns it, it is possible that he will not become a counterfeit or a vain or a false philosopher.

61 The false philosopher is he who acquires the theoretical sciences without achieving the utmost perfection so as to be able to introduce others to what he knows insofar as their capacity permits. The vain philosopher is he who learns the theoretical sciences, but without going any further and without being habituated to doing the acts considered virtuous by a certain religion or the generally accepted noble acts. Instead he follows his own inclination and appetites in everything, whatever they may happen to be. The counterfeit philosopher is he who studies the theoretical sciences without being naturally equipped for them. Therefore, although the counterfeit and the vain may complete the study of the theoretical sciences, in the end their possession of them diminishes little by little. By the time they reach the age at which a man

should become perfect in the virtues, their knowledge will have been completely extinguished, even more so than the extinction of the fire [sun] of Heraclitus mentioned by Plato.[1] For the natural dispositions of the former and the habit of the latter overpower what they might have remembered in their youth and make it burdensome for them to retain what they had patiently toiled for. They neglect it, and what they retain begins to diminish little by little until its fire becomes ineffective and extinguished, and they gather no fruit from it. As for the false philosopher, he is the one who is not yet aware of the purpose for which philosophy is pursued. He acquires the theoretical sciences, or only some portion thereof, and holds the opinion that the purpose of the measure he has acquired consists in certain kinds of happiness that are believed to be so or are considered by the multitude to be good things. Therefore he rests there to enjoy that happiness, aspiring to achieve this purpose with his knowledge. He may achieve his purpose and settle for it, or else find his purpose difficult to achieve and so hold the opinion that the knowledge he has is superfluous. Such is the false philosopher.

62 The true philosopher is the one mentioned before.[1] If after reaching this stage no use is made of him, the fact that he is of no use to others is not his fault but the fault of those who either do not listen or are not of the opinion that they should listen to him.[2] Therefore the prince or the *imam* is prince and *imam* by virtue of his skill and art, regardless of whether or not anyone acknowledges him, whether or not he is obeyed, whether or not he is supported in his purpose by any group; just as the physician is physician by virtue of his skill and his ability to heal the sick, whether or not there are sick men for him to heal, whether or not he finds tools to use in his activity, whether he is prosperous or poor—not having any of these things does not do away with his physicianship. Similarly, neither the *imamate* of the *imam,* the philosophy of the philosopher, nor the princeship of the prince is done away with by his not having tools to use in his activities or men to employ in reaching his purpose.[3]

63 The philosophy that answers to this description was handed down to us by the Greeks from Plato and Aristotle only. Both have given us an account of philosophy, but not without

giving us also an account of the ways to it and of the ways to re-establish it when it becomes confused or extinct. We shall begin by expounding first the philosophy of Plato and the ranks of order of his philosophy. We shall begin with the first part of the philosophy of Plato, and then order one part of his philosophy after another until we reach its end. We shall do the same with the philosophy presented to us by Aristotle, beginning with the first part of his philosophy. 5

64 So let it be clear to you that, in what they presented, their purpose[1] is the same, and that they intended to offer one and the same philosophy. 10

Part II

The Philosophy of Plato

THE PHILOSOPHY OF PLATO, ITS PARTS, THE RANKS OF ORDER OF ITS PARTS, FROM THE BEGINNING TO THE END

3

i

1 First he investigated the human things that make man enviable as to which of them constitutes the perfection of man as man, for every being has a perfection. Thus he investigated whether man's perfection consists only in his having his bodily organs unimpaired, a beautiful face, and soft skin; or whether it consists also in his having a distinguished ancestry and tribe, or having a large tribe and many friends and lovers; or whether it consists also in his being prosperous; or being glorified and exalted, ruling over a group or a city in which his command is enforced and which submits to his wish. In order to attain the happiness that gives him his ultimate perfection, is it sufficient for man to have some or all of these? It became evident to him as he investigated these things that either they are themselves not happiness at all but are only believed to be happiness, or they are not themselves sufficient for man to attain happiness without having something else in addition to them or to some of them.

2 Then he investigated what this other thing must be. It became evident to him that this other thing, whose attainment is the attainment of happiness, is a certain knowledge and a certain way of life.

All this is to be found in his book called the *Alcibiades* (that is to say,[1] *model*) *Major,* which is known as *On Man.*

3 Then, after that, he investigated what this knowledge is and its distinguishing mark, until he found what it is, its distinguishing mark, its character, and that it is knowledge of the substance of each of the beings: this knowledge is the final perfection of man and the highest perfection he can possess.[1] This is to be found in his book that he called the *Theaetetus* (meaning *voluntary*).

4 Then, after that, he investigated the happiness that is truly happiness, what it is, from which kind of knowledge it proceeds, which state of character it is, and which act it is. He distinguished it from what is believed to be happiness but is not. And he made it known that the virtuous way of life is what leads to the achievement of this happiness. That is to be found in his book that he called the *Philebus* (meaning *beloved*).

ii

5 When he had recognized the knowledge and the way of life that make man happy and perfect, he first began to investigate the knowledge: if man should aspire to a knowledge of the beings that has this character, can he attain it? Or is it the case—as Protagoras (*the carrier*[1] *of bricks*) asserts—that man cannot attain such knowledge of the beings, that this is not the knowledge that is possible and that man is naturally capable of attaining, that the knowledge he attains about the beings is rather the opinion of each of those who speculate about things and the conviction each happens to hold, and that the knowledge natural to man is relative to the conviction formed by each individual and is not this other knowledge that one may aspire to but will not reach? After investigating Protagoras' argument, Plato explained that, contrary to what Protagoras asserts, this knowledge, whose character was explained in the *Theaetetus,* can be attained and does exist,[2] and that this is the knowledge that belongs to human perfection, not the one asserted by Protagoras. This is to be found in his book known as the *Protagoras.*[3]

6 Then he investigated whether this attainable knowledge is attained by chance or by investigation or by instruction and study; and whether a way of investigation or instruction or study exists by which to attain this knowledge, or whether no way of investigation, instruction, or study by which to attain this knowledge exists at all—as Meno (meaning *fixed*) used to assert. For he [Meno] claimed that investigation and instruction and study are futile, useless, and do not lead to knowledge; that man either knows a thing, not through investigation or instruction or study, but by nature and chance, or does not know it; what is[1] not known cannot become known either by investigation or by study or by inference; and the unknown remains unknown forever, despite what the protagonists of investigation assert about a thing's being apprehended by investigation, instruction, or study. It became clear to him [Plato] that this knowledge *can* be attained by investigation and by a faculty and art according to which that investigation proceeds. This is to be found in his book known as the *Meno.*

iii

7 When it had become evident to him that, of all the sciences, it is by this science that the perfection of man ought to be attained, that there is here an art and a faculty with which the beings can be investigated to the point of achieving this knowledge, and that there is here an investigation, study, or instruction that is a way to this knowledge—then he proceeded to find out which art supplies this knowledge and by which investigation it is attained. He set about canvassing the generally accepted arts and generally accepted investigations: that is, generally accepted among the citizens of cities and nations.

First, he began to investigate whether religious[1] speculation and the religious investigation of the beings supply this knowledge and that desired way of life; and whether the religious syllogistic art that conducts this kind of investigation of the beings and the ways of life supplies this knowledge, or does not supply it at all, or is not adequate for supplying this knowledge of the beings and this way of life. It became clear to him, further, how much knowl-

edge of the beings and knowledge of the ways of life is supplied by religious investigation and the religious syllogistic art, and that the amount they supply is not sufficient. All this is to be found in the *Euthyphron* (the name of a man)—*On Piety*.

8 Then, after that, he investigated whether that art is the science of language, and whether when man comprehends the *significative names*[1] and the ideas they signify according to the multitude of the nation that speaks the language in question, and investigates and knows them according to the method of the students of the science of language, he will have a comprehensive knowledge of the substances[2] of things and attain that desired knowledge about them; for the students of this art themselves believe so. It became evident to him that this art does not supply that knowledge at all, and he explained how much[3] it supplies of the knowledge that can provide a *way* to that knowledge. This is to be found in his book known as the *Cratylus*.

9 Then, since the former arts do not supply this knowledge, he investigated whether the art that supplies it is poetry; whether the faculty for obtaining this knowledge of the beings is the ability to compose poems and the ability to acquire that of which poems and poetic statements are made; whether or not the recitation of poems, the understanding of their meanings, and the maxims they contain, supply us with that knowledge of the natural beings and knowledge of the desired way of life; whether or not to form one's character by poems and improve oneself by means of the maxims they contain is sufficient for man to make him lead the perfect human way of life; and whether or not the investigation of the beings and the ways of life by the poetic method is the way to that knowledge and that way of life. It became evident to him, further, how much knowledge is supplied by poetry and what the value of poetry is for being human. He explained that the generally accepted poetic method does not ever supply any of this at all, but that it leads one far away from it. That is to be found in his book known as the *Ion*.

10 Then he made a similar investigation of the art of rhetoric: whether rhetoric, or the use of rhetorical opinion when inquiring into the beings, supplies us with that knowledge about them or supplies us with knowledge of that way of life. He explained that it does not do so. It became evident to him, further, how much knowledge is supplied by rhetoric and what is the value of the amount it supplies.[1] That is to be found in his book known as the *Gorgias* (meaning *service*).

11 Then he made a similar[1] investigation of the art of sophistry and whether or not sophistry is the inquiry that supplies the desired knowledge. He explained that sophistry does not supply that knowledge and that sophistical inquiry is not the way to that knowledge. He explained, further, the value of sophistry. That is to be found in the *Sophist* (*falsifier*) and in the *Euthydemus* (a man). For in his book known as the *Sophist* he made known what the art of sophistry is, what it does, and how many aims it pursues; what is the sophistical man, how many kinds of him there are, and into what sort of affairs he inquires; and that[2] he does not conduct the investigation that leads man to the desired knowledge and does not inquire at all into matters subject to knowledge. As for the *Euthydemus*, he explained in it the manner of sophistical inquiry and sophistical teaching, how it comes pretty close to being play, and how it does not supply that knowledge or lead to a knowledge useful either in theory or in practice.

12 Then, after that, he inquired into the investigations[1] of the dialecticians and into the dialectical investigation, whether or not it leads man to that knowledge, and whether or not it is adequate for supplying it. He explained that it is extremely valuable for arriving at that knowledge; indeed, frequently it is impossible to come to that knowledge until the thing is investigated dialectically. It does not supply that knowledge from the outset, however. No, in order to attain that knowledge, another faculty is needed along with, and in addition to, the faculty for dialectical exercise. That is to be found in his book known as the *Parmenides* (meaning *compassion*).

iv

13 When he had exhausted all the generally accepted scientific or theoretical arts and found that none of them supplies this knowledge of the beings or that way of life, he began next to

investigate the practical arts and the actions originating in these arts: whether, when man encompasses all the [practical] arts or the amount of knowledge they contain, he will have attained that knowledge of all the beings; and whether or not the actions offered by these arts supply that desired way of life, for these arts combine knowledge and action. Therefore he investigated whether the sciences supplied by these arts constitute that knowledge and whether the actions originating in them constitute that way of life. He explained that they do not supply that knowledge or constitute that way of life, and that[1] the intention of those who acquire them is not ultimate perfection, but rather[2] to obtain by them only useful and gainful things. Now the useful may be necessary, while the gainful is always good[3] but not necessary. With what they acquire of these arts, they intend, then, either necessary things or gain, that is, what is good.

v

14 Therefore, when these two [that is, the useful and the gainful] had come to light in relation to all the practical arts, he began to investigate what the necessary is and what the gainful is. (There is no difference between investigating gain, what is gainful, and what is good, for these are almost synonyms referring to the same idea.) He investigated the things that are good in the eyes of the multitude and the things that are gainful in the eyes of the multitude, whether they are truly good and gainful. He also investigated whether the things that are useful in the eyes of the multitude are truly as they believe them to be or not. He explained that they are not, and here he went through all the things that are good gains in the eyes of the multitude.

This is to be found in his book known as *Alcibiades Minor*.

15 Then, after that, he investigated the truly useful things, the truly gainful things, and the gains that are truly good, and how one does not come to any of them by way of the generally accepted arts.

16 Then he explained the relation of the things useful and gainful in the eyes of the multitude to the things truly useful and

gainful, how [true] gains or the goods are nothing but that knowledge and that desired way of life, and how the practical arts are not adequate for obtaining the gain that is the true gain.

That is to be found in his book that he called the *Hipparchus* (*observation*).

17 Then he investigated whether that desired perfection and desired end are obtained by the way of life of the hypocrites and those who falsify their purposes before people by feigning nobility and hiding another end. For this is the way of life in which the multitude saw strength and fortitude and for which they would envy a man. Hence he also investigated whether this way of life is what the multitude believes it to be. That is to be found in two of his books, which he named after two *men*[1] who were extreme hypocrites and extremely false in their ways of life and in their actions and who were considered sophists. Having reached the limit in quarrelsomeness and sophistical persuasion about themselves in speech and deed, they were reputed for their strength and fortitude. These are the two books, the first of which he called *Hippias the [Major] Sophist*[2] and the other, *Hippias the [Minor] Sophist*.[3] He explained regarding this way of life, too, that it does not supply the desired end but leads far away from it.

18 Then he investigated the pleasure-seekers' way of life and whether or not it is a way of life by which man achieves the desired perfection. He explained the pleasure that is true pleasure; what the pleasure is that is generally accepted and desired by the multitude; that true pleasure is the pleasure originating in the desired perfection; and that no part of the pleasure-seekers' way of life leads to the pleasure originating in the desired perfection. This is to be found in his book *On Pleasure [Symposium]*,[1] which is attributed to Socrates.

vi

19 When it had become evident to him that none of the arts practiced by the multitude is a scientific art that supplies that knowledge, a practical art that supplies that knowledge, or a practical art that supplies that way of life, and that none of the ways of

life generally accepted among them leads to happiness, he himself had to present and explain how the theoretical art that supplies that knowledge of the beings ought to be and how the practical art that supplies man with that desired way of life ought to be. He explained in his book known as the *Theages* (that is to say, *experience*) what that theoretical art is, and that it is philosophy. He explained who the man is who gives an account of that knowledge, and that he is the philosopher. And he explained what the idea of the Philosopher is and what his activity is.

20 Then he explained in his book known as the ›*Erastaí* [*Lovers*][1] that philosophy is not merely a good thing; no, it is that which is truly useful. Moreover, it is not useful although unnecessary, but both useful and necessary for being human.

21 Then, after that, he investigated the practical art that supplies that desired way of life, orders the actions, and guides souls toward happiness. He explained that it is the princely and political art. And he explained the idea of the Prince and the Statesman.[1]

22 Then he explained that the man who is philosopher and the man who is prince are the same; each of them is rendered perfect by a single skill and a single faculty;[1] each of them possesses a single skill that supplies the desired knowledge and the desired way of life from the outset;[2] and each of the two[3] [skills or faculties] is the agent producing that happiness which is true happiness in those who have acquired it and in all others.

23 Then he investigated what moderation is. He investigated the moderation generally accepted in cities; what the moderation is that is true moderation; what the moderate man is who is believed to be moderate; what the moderate man is who is truly moderate; what is the way of life of those who are truly moderate; and how the multitude have been ignorant of what true moderation is. That is to be found in his book known as the *Charmides*.

Similarly, he investigated the courage because of which the citizens of cities are reputed for being courageous. He explained what the courage is that is believed by the multitude to be courage, and he explained the courage that is true courage. That is to be found in his book that he called the *Laches* (meaning *preparation*).

24 Then he investigated love and friendship. He investigated

that which is friendship in the eyes of the multitude and that which is true friendship and love, and that which is truly lovable and that which is lovable in the eyes of the multitude.[1]

25 Then he closely investigated how the man who is resolved to become a philosopher or a statesman and achieve something good ought to be, and how he ought to be possessed by what he seeks, not think of anything else, and revel in it. Since revelling in this thing and seduction by it are subsumed under the genus of rapture, he therefore investigated what rapture is and its genus. Since some revelling and seduction are blamable and some praiseworthy, and since some praiseworthy things are believed by the multitude to be praiseworthy although they may not be truly praiseworthy, while others are truly praiseworthy, he investigated both of them. And since the excess of seduction and revelling is attributed to enchantment and madness, and upon the first view these are believed to be blamable, he investigated also the enchantment and madness that are said to be blamable. He mentioned that the ones who bestow blame upon these two do praise them sometimes. For they believe that, frequently, men become enchanted and mad from divine causes, so much so that some of them foretell future events, and others are possessed by the love of goodness and the quest of the virtues practiced in mosques and temples. Others associate the poets who are skilful in making poems with spirits as the cause of their enchantment and madness. These and similar things belong to praiseworthy enchantment and madness. He investigated the praiseworthy seduction, rapture, enchantment, and madness, when it is divine, in what manner it occurs, in which soul it occurs, and in which man it occurs. He mentioned that he who praises this [madness and so on] is convinced that it occurs in the man whose soul is divine: that is, the man who craves and longs for divine things. He began to investigate the character of this soul; and how some revelling, seduction, rapture, madness, and enchantment is praiseworthy and divine, while some is blameworthy and human. As to that which is human, human madness is frequently associated with bestial madness, so that there are those whose madness is that of a lion and their enchantment that of a bull, and those whose madness and enchantment are those of a he-goat. He investigated all of these things, distinguished bestial

revelling from revelling in divine things, and investigated the kinds of enchantment and revelling in virtuous things, which are associated with divine causes. And he explained that philosophy, statesmanship, and perfection cannot be achieved unless the soul of the man who seeks them revels in them and in the end that he[1] seeks; neither the philosopher nor the statesman can perform his activity with which he seeks the virtuous end unless that very revelling continues to be in him. 15

26 Then he investigated the methods that the man who aims at philosophy should use in his investigation. He mentioned that they are the method of division and the method of bringing together.[1] **16**

27 Then he investigated the method of instruction: how it is conducted by two methods—the method of rhetoric and another method he called *dialectic*; and how both of these methods can be employed in conversation and in speaking and employed in writing.

28 Then he explained the value of conversation and the value of writing, the extent to which instruction through writing is defective when compared to conversation, and what it is that writing achieves and the extent to which conversation fails in this respect; and how the superior method of instruction is conversation, while the method of writing is inferior.[1] He explained what things a man ought to know in order to become a philosopher. 5

All this is to be found in a book of his that he called the *Phaedrus* (the meaning of this word in Arabic is *shining* or *illuminating*). 10

vii

29 When it had become evident to him that this art is not one of the generally accepted arts, nor is this way of life, which is truly a virtuous way of life, generally accepted among nations and cities, and that neither the perfect philosopher nor the perfect prince could use his acts in the nations and cities that existed in his time, nor could the reveller who is in search of the two [perfections] and of the virtuous way of life either study or investigate them 15

in such cities and nations, he then began to investigate whether when these [perfections] become too difficult to find, one ought to settle for the opinions he finds among his ancestors or among the citizens of his city,[1] and whether he should settle for the ways of life he finds among the citizens of his city or nation. He explained that one ought not to settle for them without investigating them and without seeking to arrive at the virtuous things that are truly virtuous,[2] whether these are the same as the opinions and the ways of life of the citizens of his city or opposed to them; and he ought to seek the truth among the opinions, and among the ways of life seek the virtuous one that is truly virtuous. This is to be found in his book that he called the *Crito*; it is also called the *Apology of Socrates*.[3] **17** 5

30 Then he investigated in another book of his whether man ought or ought not to prefer security and life along with ignorance, a base way of life, and bad actions—whether there is or is not a difference between man's existence and life when leading such a way of life, and his existence and life, not as a man, but as a beast and worse than a beast. Whether there is a difference between man's death and nonexistence, his existence when combined with ignorance and the leading of this base way of life, and his being a beast and worse than a beast. Whether it is preferable to lead a beast's way of life and a way of life worse than a beast's way of life, or to die. Whether, when man despairs of existing for the rest of his days in conformity with the virtuous way of life and with philosophy, and knows that to the end of his days his existence will depend on leading a bestial way of life or a way of life by which he becomes worse than a beast, he ought to lead such an existence and prefer it, or he ought to view death as preferable. And whether, when he needs to be moderate or courageous or to possess any other virtue, and neither this virtue, this moderation, nor this courage is true virtue or moderation or courage but only believed to be so, man ought to prefer life, or he ought to prefer death. He investigated these things in two of his books; the first is the *Protest of Socrates Against the Athenians*,[1] and the second is his book known as the *Phaedo*.[2] 10 15 20 **18**

He explained[3] that one ought to prefer death to such a life and

that such a life only leads him to one of two conditions: the performance of either bestial activities alone or else activities worse than bestial. For there is no difference between [seeing] a man who possesses the most perfect bestiality and performs the most perfect activities thereof, and assuming that he is dead and transformed into that beast and its shape. Thus there is no difference between a man who acts like a fish,[4] and a fish with a shape[5] like that of a man: *his*[6] only virtue is his[7] human shape and the fact that he acts like a *perfect* fish. Nor is there any difference between this and his shape's being like a fish, his acting like a fish, and yet calculating his actions well like a man. For in all this he does not possess humanity except insofar as the calculation, by which he performs the activity of that beast well, is the calculation of a man. He [Plato] explained that the more perfectly one performs the activity of the beast, the further he is from being human; had the activities of that beast proceeded from some animate body having the shape of that beast along with man's calculation about these **19** activities, such activities would be nothing but the most perfect activity that can proceed from that beast—the more perfectly and effectively the animate body performs the activities of that beast, the further it is from being human.

Therefore he saw that the time and life of whoever does not investigate are not those of a human being, and that he should not mind dying and[8] preferring death to life as Socrates did. For when he [Socrates] knew that he could not survive except by conforming to false opinions and leading a base way of life, he preferred death to life. This made it evident that if man shares in [the opinions and the ways of life of] the citizens of those nations and cities, or those who resemble them, his life will not be that of a human being; and if he should wish to depart from their ways and become isolated from them and seek to achieve perfection, he will lead a poor existence. It is very unlikely[9] that he could achieve what he wants. For he will necessarily be visited by one of two fates, either death or deprivation of perfection.

Therefore[10] it became evident that one needs another city and another nation, different from the cities and nations existing at that time. Therefore he had to investigate what distinguishes *that*

city. He started by investigating what true justice is,[11] how it ought to be, and how it ought to be applied. As he was conducting this investigation, he found he had to investigate the justice **20** generally accepted and applied in cities.

viii

31 When he had investigated it and looked around him, it became evident to him that it is complete injustice and extreme evil; these grave evils—and they are extremely grave—would not slacken or vanish so long as the cities continued as they were; another city ought to be founded which is different from those cities, in which and in the like of which there would be true justice and all the goods that are truly good. This will be a city that will not lack anything that leads its citizens to happiness. Now if it should be decided that this city will have *all* the things by means of which happiness is achieved, it is indispensable for its inhabitants that the princely craft in it be true philosophy, that philosophers constitute its highest part, and that those who hold other ranks be subordinate to them.

32 Then he mentioned next the cities antagonistic[1] to it and the way of life of each; and he stated the causes of the changes that inhere in virtuous cities so that they change and are turned into the opposite cities. For it is indeed in this city alone that man arrives at the desired perfection.

This is to be found in his book the *Republic*.[2]

ix

33 When this city had been rendered perfect in speech, he next presented in the *Timaeus* an account of the divine and natural beings[1] as they are perceived by the intellect and known by means of that science; [he showed] what distinguishes the sciences that ought to be set up in that city; how everything that is not yet known will be inquired into and a comprehensive investigation of

it will be made in that city; and how there will be a succession of men who will investigate this science and preserve what is discovered of it, until all of it is found.[2] 20

34 Then he presented in the *Laws* the virtuous ways[1] of life **21** that the inhabitants of this city should be made to follow.

35 Then he explained what distinguishes the human perfection achieved by him who combines the theoretical sciences and the political and practical sciences, and what ought to be his rank 5 in this city. He explained that it is the rank of ruling the city. This is to be found in his book known as the *Critias* (meaning *separating out the truths*), where Plato narrates how Critias described how the one generated by Timaeus and whom Socrates reared and educated ought to be—meaning by this the one who combines the capacity for the knowledge and the art of each of the 10 two, which are presented in the *Timaeus* and in the *Laws*.

There remained for him now to have this city realized in deed. He mentioned that this is accomplished only by the legislator of this city. Therefore he afterwards investigated how the legislator ought to be. That is to be found in his book that he called the *Epinomis* (meaning *investigator*).

x

36 When he had done this, he afterwards investigated the 15 manner and the method by means of which the citizens of cities and nations ought to be instructed in this science and their character formed by those ways of life, whether the method ought to be the one used by Socrates or the one that was the method of Thrasy- **22** machus. Here he delineated once again Socrates' method for realizing his aim of making his own people understand through scientific investigation the ignorance they were in. He explained Thrasymachus' method and made it known that Thrasymachus was more able than Socrates to form the character of the youth and instruct the multitude; Socrates possessed only the ability to 5 conduct a scientific investigation of justice and the virtues,[1] and a power of love, but did not possess the ability to form the character of the youth and the multitude;[2] and the philosopher, the

prince, and the legislator ought to be able to use both methods: the Socratic method with the elect, and Thrasymachus' method with the youth and the multitude.[3]

37 Then, after that, he investigated what orders of rank the princes, the philosophers, and the virtuous ought to have in the 10 eyes of the citizens of the city, by what means the citizens of the city ought to glorify them, and by what means the virtuous ought to be exalted and the princes exalted. That is to be found in a book called the *Menexenus*. He stated that his predecessors had overlooked this.

38 Then, after that, he mentioned once again the multitude of the citizens of cities and nations living in his time. He stated 15 that the perfect man, the man who investigates, and the virtuous man are in grave danger in their midst; one ought to devise a plan for moving them [the multitude] away from their ways of life and opinions to truth and to the virtuous ways of life, or closer to them. In some *Letters* he composed he gave an account of how to abolish the ways of life of nations and the corrupt laws that **23** prevail in the cities, how to move the cities and nations away from them, and how to reform their ways of life. He described in these letters his own view as to the mode of government that ought to be applied in order to move them gradually to virtuous ways of life and to correct laws. As an example of this, he mentioned the Athenians (his own people) and their ways of life. He described 5 how to abolish their laws and how to turn them away from them. He described his view regarding the way in which they could be moved gradually, and he described the opinions and the laws toward which they should be moved after the abolition of their ways of life and laws.

This, then, is where the philosophy of Plato terminated.

Part III

The Philosophy of Aristotle

THE PHILOSOPHY OF ARISTOTLE, THE PARTS OF HIS PHILOSOPHY, THE RANKS OF ORDER OF ITS PARTS, THE POSITION FROM WHICH HE STARTED AND THE ONE HE REACHED

i

1 Aristotle sees the perfection of man as Plato sees it and more.[1] However, because man's perfection is not self-evident or easy to explain by a demonstration leading to certainty, he saw fit to start from a position anterior to that from which Plato had started.[2] He saw four things that everyone pursues from the outset and considers desirable and good—they are desired and pursued by nature, as it were, from the beginning, and no other pursuit precedes them in time: (1) the soundness of the human body, (2) the soundness of the senses, (3) the soundness of the capacity for knowing how to discern what leads to the soundness of the body and the senses, and (4) the soundness of the power to labor at what leads to their soundness.[3] This (3) is the kind of knowledge that is useful and necessary. And this (4) is the kind of labor that is useful, necessary, and preferred to everything else, be it the labor of a man by himself, or accompanied by the labor of others for him, or accompanied by his labor for others, and whether he performs it by deed or speech. The deed by which this labor is performed is the useful and necessary deed that has priority,

and the speech by which this labor is performed is the useful and necessary speech. Beyond this, one may prefer also that these four things exist in the most excellent state of their soundness.[4]

60 2 Then he found out that next to desiring these four, the soul desires to understand the causes of sensible things, of what is observed in the heaven and on earth, and of what man sees in his own soul and the state in which he finds it. He desires to know the truth of what insinuates itself into souls and comes to the mind, be it a thing that insinuates itself into a man's own soul or something that has insinuated itself into the soul of someone else who has informed him of it. Now such things do not belong to any of those four; knowledge of them is not useful for the soundness of any of the four or with regard to anything else or for the sake of anything else, apart from knowing the thing and resting upon the knowledge of it. Yet when man understands any of them he finds it pleasant and delights in it. The firmer and nearer to certainty his knowledge, the greater his rejoicing and his pleasure in what he understands.[1] The more perfect the being he apprehends and understands, the greater his rejoicing and his pleasure with his apprehension.

Subsequently man comes to the view that he possesses, because of this apprehension, a certain excellence, nobility, high rank, and exalted position, although other men do not acknowledge this. No, as a result of his own reflection he sees himself to have attained excellence and perfection, even though others do not perceive it. He considers himself exalted and of a high rank, and marvels at himself and at what he has apprehended. Then he comes to the view that perhaps this ought to be acknowledged by men, or to the view that he ought to be honored, magnified, glorified, and eulogized by others for it, especially with regard to such things as are not likely to be known by everyone and are difficult for all to apprehend.[2]

Although all men view such knowledge and cognitions as neither necessary nor useful for any of those four things, but rather beyond the necessary and the useful, they view them nevertheless as something exalted and of a high rank. Therefore, from the outset, they divide the knowledge desired by man into two kinds: a knowledge desired for its use for the soundness of those

four things or for the most excellent state of their soundness, and a knowledge that is beyond the merely useful knowledge and that is desired for itself and not for anything else. This division derives its validity from the soul's desire for the two kinds of knowledge, even before deciding between them as to which is to be preferred 61 and which to be avoided. Consequently, he called the first kind *practical,* and the second kind *theoretical,* science.[3]

Moreover, although men may use their *senses* to discern what is useful to them in those four pursuits, they may use them also to apprehend and know what is not useful to them in any one of those pursuits. They desire sensible things, the apprehension of which by sense-perception is not useful for any of those four things—for instance, statues, elegant sceneries, objects delightful to hear and to smell, and objects pleasurable to touch—for nothing else besides having them as pleasurable objects of sense-perception. For "pleasurable" means nothing other than that one is apprehending most excellently a most excellent object of apprehension; for there cannot be pleasure without apprehension; it is present in [animals] that apprehend by sense-perception and absent from those that do not.[4] Likewise, there are, besides the knowledge of sensible things, other cognitions obtained by sense-perception that man may desire although he confines himself to knowing and apprehending and to the pleasure he experiences in apprehending them: for instance, the myths, stories, histories of peoples, and histories of nations, that man narrates and to which he listens solely for the delight they give. (For to delight in something means nothing other than the achievement of comfort and pleasure.) Likewise, looking at imitators and listening to imitative statements, listening to poems, and going over what one comprehends of the poems and the myths he recites or reads, are used by the man who delights in them and is comforted by them only for his pleasure in what he comprehends.[5] The more certain his apprehension, the more perfect his pleasure. The more excellent and perfect in himself the man who comprehends, the more perfect and complete his pleasure in his apprehension. Therefore these, too, are cognitions and apprehensions that are sought only for the sake of apprehension and the pleasure of apprehension, not for the sake of being utilized with respect to those four things.

And although men may use them on the ground that they are also useful with respect to those four, it is only accidentally that he who intends pleasure uses them for the sake of any of those four.

3 Then he found out that there are, in addition to what is apprehended by the senses, certain necessary cognitions that originate with man as it were innately and by nature. Frequently man uses the cognitions, acquired by the senses, in his labor for the soundness of those four things; then he finds out that the cognitions gained by the senses are insufficient, so he turns and uses the innate cognitions originating in him. Yet when he applies himself to the satisfaction of all his needs, he sees that the cognitions originating in him are also insufficient for many things most of the time, and finds that they do not embrace all his needs. Consequently, he hesitates about many of his needs and does not act upon them until he considers, thinks, investigates, and deliberates. Usually he attempts to obtain this knowledge from others: he asks and consults with them about what he does not think he can infer and discover fully by himself. All this is because he is not innately directed to such knowledge. Through investigation, consideration, deliberation, and reasoning, he uncovers a knowledge he did not have originally. But frequently he is perplexed and unable to determine which of two alternatives is useful and which harmful; or perhaps it becomes obvious to him after investigation that he has made a mistake in many of his inferences without being aware of it at first. It is also characteristic of the sciences he acquires through his desire for them, his investigation of them, and his deliberation upon them, that some are firmer and some shakier than others. However, once he attains *certainty* about what he was investigating, this is the perfect science of what he wants to know and the end beyond which he can hope for no better assurance and reliability. This, then, is man's situation with respect to the practical sciences.

Consequently, he explained that there are three sorts of apprehensions in the practical sciences: first, apprehensions by the senses; second, apprehensions by primary knowledge, beyond what is apprehended by the senses; and third, what is apprehended by investigation, consideration, and deliberation. It appears that these very same modes of apprehension are present also in the

theoretical sciences. Hence all apprehensions become three: (1) sense-perceptions, (2) primary cognitions by a knowledge beyond what is supplied by the senses, and (3) cognitions resulting from investigation and consideration. As to the cognitions resulting from investigation and deliberation, their knowledge is originally acquired through primary cognitions—things that do not result from investigation or deliberation. When they were being investigated prior to being known, they were explored and called *sense-perceptions*. The primary cognitions employed to explain what one wants to know are the *premises*. What one wants to know are the *questions*[1] (once they are known, he calls them *conclusions*). Hence all these are originally three things.[2]

He explained that man cannot find the useful things, nor how to labor nor for which of them to labor, without knowing the end for the sake of which he should labor and without having that end defined and present before him.[3] We know that man labors for the sake of the soundness of those four things that were mentioned. But if man proceeds to consider and investigate carefully which one of these four is the end of the others, and which are the ones pursued for the sake of this end—such as considering whether the soundness of the body is for the sake of soundness of the senses, or whether man pursues the soundness of his senses only to use his senses for the soundness of his body (whence the senses would be there solely for discerning that by which one attains the soundness of the body), or whether all four are given only for the sake of achieving every useful thing—there will be room here for perplexity. For if the senses themselves are the end, one ought not to permit the senses to serve what contributes to the soundness of the body; and the body may even be an instrument for, or subservient to, or a material constituent of, the senses. Hence the power to discern well what leads to the soundness of the body, the soundness of the power to labor, and the power to labor—all will be for the sake of the soundness of the senses. Hence the activity of the senses, and what man obtains by them, will themselves be the end.

One may, however, contradict all this. For we find ourselves using the senses to apprehend what is useful for the soundness of our bodies (and for the soundness [. . .] of the rest), or else we

place each one at the service of the other. Each one, then, is for the sake of the other in a circular way. Hence either both should be made the ends of each other—and how is this possible!—or a part of each should be made the end! Man must understand the truth of these things so that his labor will be directed toward some definite end and not be for no end or for a thing that might not itself be the end. Besides, why should man conclude that the well-being of the body and the well-being of the senses (which he finds innate in himself) are themselves the end? This also requires evidence. For man is one of the beings not given their perfection at the outset. He is rather one of those given only the least of their perfections and, in addition, principles for laboring (either by nature or by will and choice) toward perfection. Thus the well-being of the body and the well-being of the senses given to him might be similar to what is given him in childhood and youth. To confine himself to the well-being of the body and the soundness of the senses might be similar to confining himself to childhood and youth. The soundness of the body might be preparatory to another end. And the well-being of the senses might be a principle to be used in the labor toward the end for which the well-being of the body is but a preparation. Moreover, suppose that man confined himself to the soundness of the body, to the soundness of the senses, to the soundness of the capacity for discerning what leads to the soundness of these two, and to the soundness of the power to labor. Should he then proceed to consider what is the body's most excellent state of soundness, what is the senses' most excellent state of soundness (because of which it is asserted that the senses are as excellent as they can be), what is the most excellent discernment, what is the most excellent labor, and what is the most excellent capacity for performing it? Here too there will be room for perplexity and diverse opinions.

Then suppose he turns back once again to consider, and investigates carefully whether he ought to confine himself to the merely necessary soundness of each one of the four things or whether he ought to move on to the highest excellence of each. Is the soul's desire to reach the highest excellence an intemperance of the appetites and overreaching toward what is not for man to achieve or do, or is acquiring the highest excellence of each one of these

the most perfectly human and the most appropriate thing for man?

Then if he sets out again to inquire, and considers how man's soul calls upon him to understand the truth about what insinuates itself into one's own soul and how man desires to understand the causes of visible things: is this a desire for a human knowledge, or an intemperate appetite and overreaching toward improper knowledge and what is not human at all, or toward a thing that is truly human since it is more specifically human than those four? Those four things man shares with other animals. For every animal has a body and senses and a power to discern somehow that by means of which it labors toward the soundness of its body and senses. But it does not have a desire to understand the causes of what it sees in the heaven and on earth, let alone having a sense of wonder about things whose causes it desires to understand.

Then if he considers, this also arises: why does man have a natural desire to know these things, and why—if this knowledge is not human—was he made to have an innate desire for it and have primary cognitions that guide him to the truth about the things he desires to understand? Thus these things might be human. Or perhaps man might become more perfectly human, either in his substance or in one of his attributes,[4] by knowing them. Their knowledge might itself be the substance of man or one of the acts of his substance. If it is one of the acts of his substance, and his substance to which this act belongs reaches its final perfection when it does this act, then he must know what the thing is out of which this act emanates, and whether or not that itself is the end pursued in all the preceding labor.

Moreover, souls desire to know things that are not useful for what is necessary. (Knowledge is "excessive" and useless for what is necessary when things are known "excessively"; it is even more so when, qualitatively, the knowledge of useful and necessary things exceeds the measure necessary and useful to the necessary.) Is then the soul's desire for these things an overreaching by man, an intemperate appetite, and an infirmity attached to him by nature which must be removed and suppressed, or ought it to reach its completion? There is thus in all these questions room for perplexity and diversity of opinion, and topics for consideration. Man does not prefer one of these alternatives to the other without

some evidence to convince himself or others—and there is much room for disagreement among the views of those who inquire into them. Otherwise, to confine oneself to what might not be the end condemns man to being confined to a rank of being beneath his proper one.

Moreover, if man considers what is given him by nature—that is, the soundness of body and senses, the capacity for discernment, and the natural capacity to know, inquires into what is given him also by will and the capacity for choice, and then investigates: are the instruments given him by nature sufficient for achieving the soundness of his body and senses as is the case with all animals, plants, bodies, and natural parts? If these two [that is, the body and the senses] are themselves the end, and the instruments he possesses by nature are sufficient for achieving their soundness, why then were will and choice given him? Will and choice might thus exist because of infirmity and intemperance on the part of nature; this intemperance ought then to be eliminated and suppressed. But by what thing are this will and choice to be suppressed, by will and choice or by nature? And if will and choice are human, are they for the sake of the soundness of the body and the senses that belong to him by nature? or is what belongs to him by nature for the sake of what he acquires by will and choice? or do nature and choice cooperate in order that man achieve by them still another thing? And is the ultimate perfection attained by man the measure given him by nature? or is nature, without will and choice, insufficient for man to achieve his ultimate perfection? And is the perfection man reaches by will and choice, or by both and nature, the perfection of what renders him substantial, or is it the perfection of an attribute specific to him?

In general, he ought to inquire what is the end that is the ultimate perfection of man, whether it is his substance or an act he performs after his substance is realized, and whether it is realized for him by nature or whether nature supplies him only with a material and a preparation for this perfection and a principle and an instrument for his will to use in reaching it. Is then the soundness of his body and senses the soundness of what renders him substantial? Or is this absurd, since it is common to all

animals? Or are they both a preparation and an instrument for what renders him substantial insofar as he is man? And does his desire to know the things, to the knowledge of whose truth he subsequently confines himself exclusively, perfect what renders him substantial or perfect an attribute inherent to what renders him substantial? Or is the knowledge of the truth one of the acts of his own substance, because of which his substance is realized in its final perfection?

Therefore man is forced to consider what is the substance of man, what is his final perfection, and what is the act the performance of which leads to the final perfection of his substance. But this implies knowing *what, by what,* and *how* is man, and *from what* and *for what* he exists,[5] so that when he labors, his labor will be directed toward reaching this end. For if he does not, of his own accord, learn what this perfection is, he will not know the end for which he labors.

He explained that the proper human activity becomes known only after one knows the purpose for which man is given a place in the world as a part thereof and as that by which the totality of the world is perfected—just as one cannot know the activity of the weaver or the activity of the shoemaker or any other part of the city without having known the purpose for which each one of them is given a place in the city and the measure of its utility. It is also impossible to know his purpose without knowing the purpose of the *whole* of which he is a *part,* and his place within the whole and among all the parts of the whole—just as one does not know the substance of the finger, its purpose, and its action, without knowing the hand, its substance, its purpose, and its place among all the organs of the body, and without knowing beforehand the ultimate purpose of the entire body. For the purpose of every part of a sum is either a part of the total purpose of the whole, or else useful and necessary for realizing the ultimate purpose of the whole.

Thus if man is a part of the world, and if we wish to understand his purpose and activity and use and place, first we have to know the purpose of the whole world so that we may see clearly what the purpose of man is, and also that man has to be a part of the world because his purpose is necessary for realizing the ulti-

mate purpose of the whole world. Therefore if we wish to know the thing for which we ought to labor, we have to know the purpose of man and the human perfection for which we ought to labor. This is why we are forced to know the purpose of the totality of the world; and we cannot know this without knowing all the parts of the world and their principles—we have to know the *what, how, from what,* and *for what*[6] of the whole world as well as of every one of the parts that make up the world.

Since there are two things in man—one by nature and another by will—(*a*) when we wish to know the perfection he achieves by nature and the purpose of the perfection he achieves by nature, we ought to know the natural whole of whose total purpose man's purpose is a natural part. If the world is natural (and many of its parts *are* natural), then for everything natural in the world (whether a whole or a part) and for whatever of this belongs to man by nature, a special inquiry ought to be set apart and pursued through a special investigation, theory, and science. This investigation is called *natural* inquiry. (*b*) One should also inquire into what man and all other things have by virtue of will, and set apart a special investigation and science for the things that proceed from will. This is called *human* and *voluntary* science, since it is human and specific to man alone.[7]

Once we know the perfection for the sake of which man is made, and that this perfection is such that it is not achieved by nature alone or by will alone but by nature and will jointly, then the acts and ways of life by which this perfection is attained will constitute the human and virtuous ways of life: they will be the virtues, beautiful things, acts, and ways of life that are noble. And the ones that deflect man from this perfection will constitute the acts and ways of life that are not human: they will be the vices and ugly things, and the base acts and ways of life. At this point we know that the former are what ought to be preferred and the latter what ought to be avoided.[8]

Because what is natural and innate to man precedes in time both will and choice and what is in man by will and choice, the general inquiry into what exists by nature must precede the general inquiry into what exists by will and choice. Moreover, since it is not possible to understand will and choice and what is produced

by them without a prior understanding of what belongs to man by nature, it follows also that the investigation of what exists by nature should precede the investigation of what exists by will and choice. And since the knowledge that man ought to possess and according to the requirements of which he ought to act is the certain science and not any other, it follows that he should strive after the certain science in everything he investigates, be it natural or voluntary.

Therefore Aristotle saw fit to make known at the outset what the certain science is, how many classes it has, in which subjects it exists, how it exists, and by what and from what it exists in every question; what beliefs are and what persuasion is, how many are their classes, with regard to what they exist, and by what, how, and from what they exist; what the things are that turn the investigator away from the certain science without his being aware of it, how many they are, and what every one of them is; what sort of argument is employed in instruction, of what it is composed, and how many classes it has; which one of the species of the certain science is produced by each class of axiom used in instruction; what class of the species of instruction produces certainty, and what class of the species of certainty it produces; what class of instruction produces persuasion and imagination with regard to the thing one intends to teach; what the art is by means of which man acquires the power to teach certainty and to apprehend it, how many classes it has, and what each one of them is; and what the art is from which the power over all the classes of ways of instruction proceeds.

4 Then he explained afterwards how every class of men ought to be instructed, what and by what they are instructed, and which species of knowledge of these things ought to be given to each class so that every man may know the end for which he labors and hence be guided to the right course and not remain dubious about what concerns him. Further, he made known what the argument is with which one aims at sophistry, of what it is composed, and how many classes it has. He made known the species of bad qualities and styles produced in man's mind in accordance with the classes of sophisms, which of the species arises out of which class of sophisms, and which of the species of the

true styles of science is produced through which species of sophisms. He made it known that these styles and qualities are five;[1] and he made known the ways in which one ought to guard against these sophistical approaches and with what to meet these classes of sophisms. 15

He called the art that includes all these things the art of *logic*. For it improves the calculative part of the soul, directs it toward certainty and the useful approaches to instruction and study, makes it discern the things that deflect from certainty and from what is useful in instruction and study, and also makes one discern how to articulate with the tongue and what manner 20 of argument is used in instruction and discern what manner of argument is used in sophistry with a view to using the former and avoiding the latter.

72 According to him, therefore, there emerge three sciences: the science of logic, natural science, and voluntary science.[2] He let logic take the lead in the latter two sciences and gave it the authority to judge them and examine whatever takes place in them. Since the beings covered by these two sciences—that is, natural science 5 and voluntary science—are one in the genus,[3] and since the primary intention of the science of logic is to give an account of the above-mentioned things[4] with respect to the beings covered by natural science and voluntary science, he came to the view that the materials and subjects of the three sciences are subjects that are one in the genus.[5] And since the science of logic should precede the other two sciences, he began to enumerate at the outset the beings that are the materials and subjects of the three sciences 10 and that comprise what exists by nature and what exists by will. Those existing by nature are the subject of natural science;[6] those existing by will alone are the subject of voluntary science; and those that are common—that is, can be produced by either nature or will—are the subject of both sciences. The art of logic gives one part of what he has to know about the subjects of these two 15 sciences. Hence the science of logic shares with these sciences their primary subjects and materials.

Therefore he began first to investigate and enumerate the instances of being from which the first premises are compounded, that contain the questions to be investigated, and that are the

primary significations of the expressions generally accepted by all. These are the [*summa genera*] whose being is attested by sense-perception and of which every intelligible is based on some 20 sensible thing. He confined all of them to ten genera, called them categories, and set them down in a book called in Greek *Katēgorías* and in Arabic *al-Maqūlāt* (*Categories*). These same genera are also the subjects of the natural sciences and, in general, **73** of the voluntary sciences[6] too.

5 Then afterwards he proceeded to make known what action the art of logic takes with regard to them and how it employs them. He began by making known how these classes are compounded so as to produce propositions that are premises, and 5 in how many classes they are compounded; then, how these very things are compounded so as to produce questions, and what is common to premises and questions and what separates them. Every question is in general the subject of two contradictory propositions, one of which is necessarily true and the other false; one does not know definitely which of the two is the true one, but supposes that one of the two is true and seeks to know which it is. Of 10 all propositions (*a*) some cannot not exist and some cannot exist—between them these make up the *necessary* propositions. (*b*) Others can exist or not exist; these are the *possible* propositions. (*c*) Still others either exist now or do not exist, could in the past have been as they are now or not have been, and may in the future be in this manner or not be; these are the *existential*. 15 That is to be found in a book by him which in Arabic is called *al-ʿIbārah* (*On Interpretation*) and in Greek *Perì ʿErmēneías*.

6 Then, after that, he made known how premises are compounded and paired together so that their combination produces a statement from which only one of the two contradictory propositions about every proposed question will necessarily and definitely follow; and in how many classes the original terms[1] (on 20 the basis of which the inquiry takes place and from which the investigation proceeds in the necessary, existential, and possible premises) are paired and compounded. He called the pair *compounded from the premises* because the syllogism makes the truth **74** of the whole question follow from them necessarily and always. He made known the manner in which, in every question put

before us, we can come upon the syllogism from which the truth of that question will follow. He explained how, when a statement is put before us, we examine it to know whether it is the kind of statement from which the truth of the question, for the sake of which the statement was made, follows. He made known the mode of using these rules[2] in every rational art that uses reasoning and investigation (whichever art this may be, whether it uses little or much reasoning and investigation); and that every rational art (for everything used in any of the rational arts, whichever it may be, is employed by reasoning) uses some of these rules. Further, he enumerated everything used in any investigation and reasoning in every rational art. He thus explained that all the rules used in reasoning and investigation are included in what he had enumerated in this book of his. And he made it known, further, that every argument in every art that employs instruction and argument (whichever class of argument it may be, whether the argument is intended for instruction, or sophistry and hindering instruction) proceeds by using only these rules or some of them. He placed these rules in a book he called *›Analytiká;* in Arabic it is *al-Taḥlīl bi-l-ʿaks* (*Analysis by Conversion*).

7 Then, after that, he made known what science is in general: what the certain science is and how it is; how many classes of the certain science there are; and that these are certainty *that* the thing is, certainty *why* the thing is, and certainty about the substance of each one of the beings whose existence is certain; how many classes there are of certainty *that* and *why* the thing is, and that they are four: knowledge of (1) *what* it is, (2–3) *from what* it is, and (4) *for the sake of what* it is.[1]

He made known how the questions with which each species of the certain science is sought ought to be formulated, and which materials and beings contain the questions and premises that fulfill these given states and conditions: they are the materials from which the *necessary* propositions are compounded—that is, the ones that cannot not exist and the ones that cannot exist; certainty cannot inhere in, or follow from, possible and existential premises. He designated the premises that posit the thing's existence the *principles of instruction* (for on their basis one knows *that* the thing is, or knows *that* it is and *why* it is), while the

grounds of the thing's existence are called its *principles of being.*[2]

He made it known which species of the certain science exist in which class of those materials [from which the necessary propositions and premises are compounded]—for not every species of certainty can exist in any chance class of necessary beings: certainty as to *why* it is cannot be acquired about whatever has no principle or cause of existence; in this case what is acquired is only the certainty *that* it exists. Nor can every species of certainty also exist with regard to every class of beings, for in many of them there cannot be every species of certainty *why* it is, but only some of them.[3] He made all these things known.

He made known what the art is that contains the materials and beings with regard to which certainty exists (that is, the materials from which the necessary propositions are compounded), and distinguished it from the arts that comprise only the beings with regard to which certainty is not possible. The latter arts inquire into, or use, only the materials from which the possible and existential propositions are compounded. He bestowed the name *wisdom* specifically upon this art to the exclusion of others. He maintained that the others that are called "wisdom" are wisdom only relatively and by comparison to this art: every other art that follows the example of this art and emulates it in the exhaustiveness of its knowledge and actions is called "wisdom" by comparison to it, just as a man is given the name of an angel[4] or of a virtuous man in the hope that he will emulate in his actions the actions of the virtuous man or the angel[4] in question. Just as a man may be given such a name because his activities and his treatment of his subordinates correspond[5] to those of the virtuous man or the angel in question, similarly the rest of the arts that are called "wisdom" are only so called by analogy, comparison, and likeness to this art, and because they are believed to possess certain powers that are in fact possessed by this art.[6]

8 Then he explained how many divisions of this art there are, how many species they have, what every one of their species is, what class of materials and beings is contained in each, what the questions are that pertain to it specifically, what the premises are that are in it, how the questions and the first premises in it ought to be, and what sort of investigation ought to be made in

each question or each species of this art. For every theoretical art is composed of some subjects that pertain to it specifically, of some questions that pertain to it specifically, and of first premises that pertain to it specifically. He made these things known with reference to all the species of the theoretical art that he called *wisdom.*

9 Then he made known the relative ranks of the species of the theoretical arts, what is common to them and what differentiates them, which of them is emphatically prior and which of them is emphatically posterior, and which of them is subordinate to which. He investigated whether there is among them an art that precedes all the rest so that there will be no species emphatically prior to it and so that the rest will be subordinate to that one species. He explained in how many respects an art can be subordinate to another art. And he explained that the one that was shown to be emphatically prior to the rest ought to be the most deserving of the name *wisdom* and the most deserving of the name *science*. Consequently, it is called *true wisdom, true science,* the *wisdom of wisdoms,* the *science of sciences,* and similar names.[1]

10 Then he made known how the first premises are used in the discovery of each question in each art.

11 Then he made known the character of theoretical argument, how many classes it has, how every class ought to be used in each one of these species of the theoretical art, and which class of argument pertains specifically to which species of theoretical art; what instruction is, its character, how many classes it has, of what it is composed, and which of its classes pertains specifically to which one of the species of the theoretical art.

12 Then afterwards he made known how the man ought to be in whom this faculty and this art can be realized, which psychical state he ought to possess by nature in order to be able to acquire this art and develop the faculty for performing its functions, and how many these natural psychical states are; he who does not possess this natural state ought not to practice this art; if he does practice it, he will not develop the faculty for fulfilling its functions; if this is so, then he ought to be made to discern the human, natural, and voluntary things (which he had intended to explain to himself by means of this art) by other ways of instruction, and this ought to be established in his soul

by some other sort of knowledge; and men as a whole are equipped by nature for different approaches to truth and for discerning it and having it established in their souls by different sorts of knowledge. Consequently, the one in whom the states that he [Aristotle] enumerates in this book are natural and innate, belongs to the elect by nature, and the one who does not possess these states belongs by nature to the vulgar. The latter should know the things with regard to which the certain science is possible by some other approaches to knowledge.[1]

All this he set down in a book that he called *Second ›Analytiká.*

13 Then, after that, he gave an account of another art by which man trains himself to acquire the capacity for quickly finding all possible syllogisms about any question at all in any theoretical art whatsoever, in order that such syllogisms as are found by the investigator be ready for the application of the scientific rules that he gave in the preceding book: that is, for being examined by the investigator who will then accept what corresponds to those rules and reject what does not. For he saw that it is extremely hard for man to hit upon the demonstration that leads him to certainty regarding the question before him, or for his mind to move immediately to inquire about the demonstration and consider it. Therefore he required a training art and a faculty to be used as an instrument and servant or a preparation for the art of certainty. He gave here an account of all the rules that can be employed by the man who investigates when he is investigating and reflecting, some for when he is investigating by himself and some for when he is investigating with others. He formulated this art primarily so that with it man will be equipped to show his power of finding a syllogism quickly when he is investigating with others; for, when he is equipped with this art, it also substantially develops the faculty in him for using it when he is alone by himself, and makes him exceedingly cautious and more quick-witted. For when man imagines in everything he is investigating by himself that there is as it were somebody else who is supervising or examining him, his mind will be made more quick-witted and he will be more likely to be cautious. Therefore he equipped man with it so as to employ it with others in question and answer. He called this training and investigating art, which is an equipment for training

oneself and for becoming ready to approach science, the art of *dialectic*. He set it down in a book of his known as *Topiká*, which is the *Topics*.

With the training art one conducts the preliminary investigation; it is a tool to be employed in question and answer. Therefore when investigating by himself a man has no assurance that things may not happen that cause him to err about the truth of the question before him or that deflect him from the way of truth to another. Although the training investigation does not move immediately to find the truth, by it man is nevertheless on the way to truth; and it is more to be feared that he might err at this stage than when he goes beyond the training art to the use of demonstration. For man does not err, or hardly ever errs, when using demonstrations. On the other hand, so long as he is still engaged in the training art, there is no assurance against error, since he is merely investigating with rules and methods not corroborated yet by the methods of certainty. Further, this art is a mere tool to be used by man when questioning and answering others in certain kinds of arguments whose purpose is neither instruction nor study, but only a training by which each of the disputants makes a show of his power in fending off what might be put forward to weaken or mislead him, and in such an activity one is very likely to fall into error.

Therefore Aristotle needed to give, along with this training art, an account of another art [that is, sophistry], permitting man to understand everything that deflects him from the way of truth when investigating by himself; and he had to make known all the **80** classes of argument that stand in the way of truth and cause him to fancy that he is on the way of truth without being on the way to it. He also formulated this art so that its arguments can be set before the investigator instead of being put forward by him. Thus, while he formulated the training art so that its arguments can be put forward by both the investigator and his interlocutor, he formulated it—this art by which the investigator guards against error and whatever stands in the way of truth and turns him away from it—so that its arguments could be presented by the interlocutor to the investigator. As for the investigator himself, he did not enable him to present the arguments of this art to his interlocutor;

instead he gave him still another power and art [that is, the art of of examination],[1] by which to meet, and free himself from, the sophistical arguments set before him. Hence he gave the investigator as it were two arts. One of them is the art whose arguments are presented to him by the interlocutor to divert him from pursuing the way to truth through the training art. The second is the art by which he meets and repels the arguments presented to him by the interlocutor—not for the sake of making his interlocutor discern the truth or to engage with him in an investigation using the training art, but for the sake of repelling what obstructs him from employing the training art (whether by himself or with others), and training himself without hindrance. He called the art that leads to error—with which he supplied the investigator so that the interlocutor might exercise it against him to prevent him from using the arguments of the training art—*sophistry*. As for the art he gave him to meet each of the things put before him by the interlocutor [that is, the art of examination], he formulated it as an intermediate between the training art and the art of sophistry. For it is an art that, in its first intention, is not useful when a man is investigating, either alone or with others. Nor is it a faculty whose function is to confute the sophist or to persuade him. It is rather a faculty for repelling him and stopping him short of what he intends to set before the investigator or **81** before the audience, which may expect some benefit from the success of one of the disputants in an argument, or before the judges, be they one or a group. Therefore the man who answers the sophist ought to answer him sometimes only with what stops him in the eyes of the onlookers and the multitude and does it in a way comprehensible to the multitude and to the judges who are present. In executing this action, he should aim either at truly stopping and silencing the sophist, or at stopping him in the eyes of the onlookers and judges who are present. Consequently, this is an art that is outside the sphere of the training art and the other argumentative arts.

The art of sophistry has six[2] aims with regard to whomever it argues against: (1) refutation, (2) perplexity,[3] (3) contentiousness and the administration of flattery,[4] (4) reduction to solecism in speech and argument, (5) reduction to babbling in the argu-

ment, and (6) silencing, that is, to prevent someone from speaking altogether—even though the man who is being argued against were able to speak—by reducing him to a condition in or because of which he will prefer silence. (1) To refute is to reduce somebody to a thesis contrary to the one he had laid down, by means of things that falsify his original thesis. These things are the same as the ones that, when a man uses them by himself, lead him astray and deflect him from the truth toward what contradicts it by causing him to reject the truth and prefer what contradicts it. (2) Perplexity is something else. For perplexity means that a man is caught in bewilderment between two contradictory convictions because the sophist presents him with something from which one of the two convictions follows, and presents him also with something else from which the contradictory conviction follows. That is, when he is asked concerning a thing: "Is it so, or is it not so?" whichever he answers, a refutation follows. This is the method of perplexity. Hence to refute someone is to transfer him positively from one of the two contradictories to the other, while to perplex him is to transfer his mind from the first to the second, from the second to the first, and from the first to the second: soon the assertions following from the two contradictories possess equal force, at which time perplexity occurs. (3) As to confounding and contentiousness, it is to reduce a man to rejecting things that are perfectly obvious by raising doubts about those aspects of them that are self-evident, so that the man forfeits every principle of instruction and study, and even goes beyond this to suspect sense-perception regarding things whose validity is attested to by sense-perception, to suspect what is generally accepted, and to suspect things valid by induction. For this is one of the functions of the art of sophistry. Its intention is to obstruct investigation and obstruct a thing's apprehension by an investigation. These three styles affect the soul; they are very bad styles; and they are produced by this sophistical art alone. As to the remaining three styles, they are twists only of language and not of the mind, while the former three are twists of the mind. (4) For when a man is reduced to solecism in argument, he is either reduced to solecism absolutely by nature or custom, or reduced to solecism in the language of the nation whose language is used in the argument

against him. Likewise, solecism follows: (*a*) absolutely, in which case it has to do with things that are hard to express adequately and things that, when combined, lead one to fancy that the content of the proposition expressing the combination is absurd. This occurs in all languages. Or (*b*) it may occur in the language belonging to a certain nation. Hence a man is reduced to solecism absolutely when he is reduced to absurdity regarding the content of a generally accepted and perfectly common expression. But when that absurdity follows from a combination in the language of a certain nation specifically, and the two partners to the argument are talking in the language of that nation, the solecism that follows is relative to the language of that nation. (5) Reduction to babbling is similar. For solecism means to express things inadequately, and the absurdity of the meaning follows because of the inadequacy of the expression. Babbling means that the expression exceeds the meaning, and the absurdity follows from the superimposition of one meaning on another. For there are numerous ideas that cannot be expressed except by means of an expression that is inevitably repetitive, either actually or potentially, and this leads one to fancy a repetition in the meaning, from which repetition in the meaning an absurdity follows. It is only in or through such expressions that the sophist can reduce someone to babbling. (6) As to silencing, it is the meanest function of sophistry, for it proceeds by causing fear or shame or other passions. Aristotle enumerated with regard to every one of those styles all the components of the argument by means of which the sophist reaches his purpose.

14 Then he gave an account of the rules that enable man, provided he keeps to them and trains himself in them, to contend with the sophist in each one of these styles by means of obstructing him from executing his action.

All this is to be found in a book of his that he called *Sophistiká*. Its purpose is to make the training art secure and prevent the preparation for truth from being dissipated. For this art of sophistry indeed contradicts the art of dialectic—that is, the training art—and obstructs it from performing its functions, which are the way to truth and to certainty. It is in this way that the art presented by Aristotle in this book of his is useful with refer-

ence to truth. It defends the instrument and servant of truth, for dialectic is the instrument and servant of the certain science.

These, then, are the methods by means of which Aristotle canvassed the certain science, gave an account of the way to it, and intercepted what stands in its way.

ii

5

15 When he had achieved this much of the certain science, he afterwards gave an account of the powers and the arts by which man comes to possess the faculty for instructing whoever is not to use the science of logic or to be given the certain science. These are two groups: a group that by nature does not possess the psychical states [mentioned in the *Posterior Analytics*];[1] and a group that does possess these states by nature, but in which they have been corrupted and obstructed in performing their functions by being accustomed to, and busied with, other functions. For Aristotle is of the opinion that he who knows with certainty the end and that by which one arrives at the end—that is, he who is equipped for truth by nature—ought to labor for a human end. But he is also of the opinion that whenever the others labor, their labor, too, ought to be directed toward what they know to the measure of their ability to know. Therefore he did not confine himself in instruction to giving an account of how to instruct the one who should be given certainty about the beings, but gave also an account of the art and the power by which to instruct all others in these very same beings.

10

15

Therefore he gave an account of the art [that is, rhetoric] that enables man to persuade the multitude regarding (*a*) all theoretical things and (*b*) those practical things in which it is customary to confine oneself to using persuasive arguments based on particular examples drawn from men's activities when conducting their public business—that is, the activities through which they labor together toward the end for the sake of which man is made.[2]

20

85

16 Then afterwards he gave an account of the art [that is, poetics] that enables man to project images of the things that

5

became evident in the certain demonstrations in the theoretical arts, to imitate them by means of their similitudes, and to project images of, and imitate, all the other particular things in which it is customary to employ images and imitation through speech. For image-making and imitation by means of similtudes is one way to instruct the multitude and the vulgar in a large number of difficult theoretical things so as to produce in their souls the impressions of these things by way of their similitudes. The vulgar need not conceive and comprehend these things as they are. It is enough if they comprehend and intellect them by means of what corresponds to them. For to comprehend them in their essences as they are is extremely hard except for whoever devotes himself to the theoretical sciences alone.[1]

10

He did not, then, omit anything by which it is possible to arrive at the knowledge of the end after which he strove, or the perfection that he made the primary goal of his knowledge and toil, or anything that makes it easier for him to instruct others, to whatever class of men they may belong; no, he treated all of them fully. He trained himself fully in all of them, he made use of the tools he gave to man to employ by himself, and he made use of the tools he gave to man to employ with others, either in teaching and guidance or in disputing and repelling whoever contends against the instruments of truth. He called the faculty resulting from these arts the *logical* faculty.[2]

15

iii

20

17 When he had completed these matters, he set out upon natural science. He turned once again to the instances of being that he enumerated in the *Categories*. He took them and assumed that they *are* in the manner attested to by sense-perception: in the manner, that is, in which we assume that these categories *are* when we use some of them to inform ourselves about the others, to inquire about the others, and to acquaint ourselves with the others—which man does either by himself or in argument with another. But this does not mean that they *are* by nature for us to use in this manner. No, he assumed at the outset that the

86

5

natural beings [that is, subjects] are natures, and essences constituted by nature; the categories are their marks that we know and perceive by the senses. These are *logical* states with which we have designated the natural beings. But the natural beings are not beings only so far as they possess such states—which is how they were taken in logic. For in logic, it was not assumed that they are natures abstracted from these states and that these are their first marks, but that they *are* in this manner and that these states are one of the two parts of their being so far as they are logical.

Now sense-perception attests to the multiplicity of natural things. This multiplicity is perceived through sense-perception in two ways. First, sense-perception apprehends a multiplicity of natural things because the [same things] are dispersed in separate places; it distinguishes them from each other by virtue of the different places they occupy. This, then, is the first kind of multiplicity; it is better known. Second, the multiplicity of natural things is apprehended through sense-perception of a single object. This happens: (*a*) when one particular sense-organ apprehends (1) a multiplicity of things that are not contrary (such as to touch a single body and apprehend that it is hot and hard and rough), or (2) a multiplicity of things that are contraries (such as that a single body is hot and cold, hard and soft, rough and smooth, and so on with regard to the other objects of sense-perception); (*b*) when several sense-organs are employed in apprehending the multiplicity of things (such as that a given object is both hot and white—for one of these is apprehended by touch and the other by sight, and so on with regard to the other senses).

18 Then he explained how much knowledge is acquired by sense-perception about each of the sensible things independently and their distinguishing marks. Furthermore, sense-perception attests to, and apprehends, that all or most of them change and transfer themselves from one place to another and from one state to another: a thing that is white becomes black, many contraries follow consecutively upon it, and it exists during this consecutive process as one thing, persistent, unvarying, carrying these consecutive states, and being their subject. For the time being he called the subject upon which the varying states follow consecutively and

that is persistent through this process *substance,* and he called the variable, consecutive states *attributes*. These, then, are the natural things apprehended and attested to by sense-perception.

As to what the categories of natural beings disclose, when some categories supply information about the others, and when some of them are used to inquire, or seek information, about the others, it is as follows: one of their categories informs us only *what* the thing is and does not provide us with any other type of information, while the others inform us *how much* it is, *how* it is, or something else that is extraneous to *what* the sensible thing is.

Moreover, the intelligibles of these natural beings, too, enable us to discover that these beings are many because of the multiplicity of their places; however, this knowledge of the multiplicity of natural beings that is supplied by the intelligibles is reached only after analogizing these intelligibles to the sensible aspects of natural beings. But as for us, when we consider the character that these intelligibles assume in ourselves, we find that we conceive of the multiplicity of the natural beings solely in terms of the multiplicity of what we intellect about them. Thus what we sense as one thing is conceived by us—insofar as it is intelligible—as many, so that the multiplicity that we conceive in virtue of what we intellect of it becomes similar to the multiplicity of sensible things because of the multiplicity of their places. Hence the same thing is asserted to be one subject, and many attributes and predicates; and out of that thing (the one subject) every one of those attributes is construed as existent, so that we say: "This given thing—which is Zayd—*is* an animal, *is* white, and *is* tall"; thus we perceive intellectually that it *is* in many ways.

However, once we distinguish what each one of these many *intelligible* predicates tells of the same thing, we identify the one through which we have intellected *what* the thing is as the "substance" of the thing. Then if this very thing, which we asserted to be the "substance," makes known (with respect to the subject of *what* it is) *how much* it is, *how* it is, or some other state besides what it is, we assert that this thing—this intelligible essence—is a "substance" insofar at it makes known *what* it is and an "attribute" insofar as it gives another description besides *what* it is. And if a given thing is sensible, and many intelligibles are attri-

buted to it, among which there is an intelligible that makes known to us *what* that sensible thing is without making known to us anything at all regarding anything else (either *how much* it is, *how* it is, or any of the other states that are not *what* it is), we assert it to be "substance" without qualification—not a relative substance, as it were, a substance of one thing and an attribute in another thing. Hence, whenever an intelligible nature is of this description, we call it "substance" without qualification. Everything else is evidently an attribute in relation to what is substance without qualification; the other, which we call "substance" in relation to it, we call "substance" to the extent that it is similar to this substance: that is, insofar as it makes known *what* a thing is. Let substance, then, be what is substance without qualification; those others, he called in general *attributes in the substance*. (This division subsequently receives as its complement the preceding division in logic: that is, of the attributes in the substance, some are *essentially* in the substance and some are in it *accidentally*. Of the essential, some are *primary* and others are *secondary*.) *This* substance is not disjoined from an attribute, either in sense-perception or when intellected. The intellect may divorce it from its attributes, and the attributes from each other, not because this is how they *are*, but only so that it may perceive the substance independently. This, then, is the being attested to by sense-perception and attested to by the way we as human beings use these things.

Aristotle simply assumed these things on the basis of the primary knowledge we have of them. Accordingly, those of them that do not at all exist by the will of man, he assumed to be *natural* beings. He explained that each one of the species of this substance whose existence is not at all due to human will has a "whatness" [that is, a shape or form corresponding to its definition][1] in virtue of which its specific substance is rendered substantial and in virtue of which its essence differentiates itself from every other species. He called the whatness of each one of them, insofar as it is a substance, *its nature*. He explained that every one of these species is constituted by its nature. (It is apparent that the whatness of every species is that for which the species performs the activity generated from it; it is also the cause of all the essential attributes in it—be that attribute a movement, a quantity, a quality, a position, or something else—just as the whatness of the wall is that for which it supports the roof and admits the attributes that walls as walls admit.) He called the species of substances, the constitution of every one of which is by "nature" in this special sense, *natural* substances; and he called the essential attributes in every one of them *natural* attributes. It was not his intention to investigate them only to the extent to which he apprehended them by sense-perception or to the extent to which he had innate apprehension of their intelligibles; rather, he sets them forth as first premises in order to investigate their properties that he mentioned in the logic, following the method that he stated there.

iv

19 When he decided to proceed with this investigation, he found statements that contradict the appearance of these things in sense-perception and contradict the actual use of what is intellected about them. These statements raise doubts whether beings change and are different from each other. They affirm that difference and change are not possible among beings in virtue of *being* and insofar as they *are*, but only in virtue of not being. For what is not the thing, has become what this thing is not, only in virtue of the latter's nonbeing. There are, then, in these particular sensible things, particular nonbeings in virtue of which the particular beings differ from each other. Therefore, if it is assumed that they *are* without qualification, the difference between one being and another is in virtue of nonbeing; but this does not exist at all, and what does not exist is not a thing. Therefore what is believed to be difference does not exist, for it would be in virtue of nonbeing and in virtue of what is not, and what is not is not being. Therefore difference and change do not exist. Since multiplicity is in virtue of difference, multiplicity therefore does not exist in the being. Therefore, *being* is one. Hence it is precluded that the same thing be endowed with many properties, and that each of these signify something other than what the others signify about that same thing; what the many expressions signify becomes nu-

merically one; indeed there exists neither word nor speech. It is this hypothesis that gave rise to the statements that contradict both what is attested to by sense-perception and what we find when we make use of the intelligibles of these sensible things.

First he refuted those statements. He explained that they are fallacies and that they do not abolish any of those premises. The latter do not become valid by his refuting the contradictory statements. They are valid by sense-perception and by virtue of what is intellected of them.

20 Then, after that, he proceeded to inquire into them. He found that each of the things he called *substance* extends in all directions, having length, width, and depth. He called them, insofar as they are endowed with the property of extending in all the directions, at times *bodies* and at times *bodily substances.* Hence natural beings become bodies and attributes, and bodily substances (or substances that admit of assuming a bodily form) and attributes in them.

These, then, are the subjects of natural science. He takes the evident premises regarding these things and first uses the dialectical methods to investigate them up to that point in the investigation of each of them at which the dialectical faculty can proceed no further. Thereupon he goes over them once again with the scientific rules and sifts them. Those that fulfill the requirements of the premises leading to certainty, he puts forward as demonstrations. And those that do not fulfill these requirements, he leaves as they are, set down in his books as provisions for the investigators who will come after him, so that in their quest for the certain science they may investigate what is given there about the material to be investigated, the method of investigation, and the use of dialectic. This, then, is the sum of his inquiry into natural science. For in everything into which he inquires, he brings together two approaches—dialectic and the certain science—until he finally arrives at what is certain about everything he aims to know. **92**

He begins first by using this method: he gives in this science an account of some universal hypotheses, which are the most general hypotheses regarding natural beings. These hypotheses are universal propositions, premises, and rules covering all natural beings. (In all subsequent things, he uses the principles of instruc-

tion.) They are not self-evident first premises, but extremely universal propositions that are not known at the outset: they are to become evident by means of demonstrations composed of self-evident first premises. He employs the dialectical faculty in investigating them; when their knowledge is attained, they are taken and put forward as a provision to be used in the explanation of all the natural things that are investigated afterwards.

The first of these hypotheses are the universal rules regarding the principles of being of all bodily substances: *what* they are, and *why* they are. He first explained that each one of them has two principles: a principle in virtue of which it is potentially, which is called the *material,* and a principle in virtue of which it is in act, which he called the *form.*

21 Then he explained that the principle that exists potentially [that is, the material] is not sufficient for making what is potential come to be in act, but that there must necessarily be a third principle to move it from potentiality to actuality. He called this principle the *agent* principle.

22 Then he explained that everything that moves and changes must necessarily be moving toward an end and a definite purpose; everything that is a bodily substance is either for a purpose and an end, or is a concomitant of, and adheres to, a thing that is for a certain purpose and end. Therefore it became evident to him that bodily substances have all the principles; all the principles of their being are of four kinds, no more and no less; and these four are the material, the whatness [that is, the form],[1] the agent, and the end. **93**

23 Then he made known what nature is, and what it is according to all those who discourse about nature. First, he made known its whatness in the most general statement that comprises all that nature is said to be according to the ancient physicists; what nature is said to be according to himself as the sum of these principles; how one can sum up what nature means; what is the rank of the principle called *nature;* what is the meaning of our saying *natural things;* in what way it is said that the principles of the being of these things are *natural* principles; what is the meaning of our saying *according to nature;* what is the meaning of what is *by nature* and of what is *not according to nature;* [what is the

meaning of] *comprehensive natural theory;* by means of what the *natural* theory of these beings is distinguished from the theory that is not natural; the rules regarding the ranking of the four principles in relation to each other (which of them are emphatically prior and which emphatically posterior); and which of them are more dominant in the beings he is investigating and pertain more specifically to natural things. These, then, are the first hypotheses and the first rules.

24 Then afterwards he gave an account of certain rules and hypotheses regarding the bodily substances themselves. He investigated first what *body* is insofar as it is extended in all directions, what extension is, by virtue of what the body is extended, and what the cause of this extension is: whether it is the interval between the parts of what is extended and the proximity of their positions or something else; and, in general, *what* extension is, *how* it is, and *from what* it is.

25 Then he investigated afterwards the substance of the natural bodily thing. Does the fact that it is a *substance* mean that it is extended in all directions? Does the fact that it is a body and is extended mean that it is a substance (a subject) for all the attributes? Or does the fact that it is a body and is extended mean that it is the *material* from which the species of substance are generated and in which the forms and the attributes succeed while it remains unchanging? Or does the fact that it is extended mean that it is a *material substance* whose extension is in virtue of its having length and width and depth? He explained that *substance* is something other than what is extended: *extended* does not signify its essence insofar as it is a substance. Our saying *extended* indicates an idea similar to our saying that it is *white*. Our saying the substance is *substance without qualification* does not mean that it is extended, nor does it mean that it has length and width and depth, but other properties of the substance. The idea of the *extended* and the idea of *extension* do not mean either the material or the form of the bodily substance (indeed its material in itself is a nonbody, and similarly its form). Extension in all directions inheres in the *composite* of the two: this extension exists in the composite as something whose being adheres to the latter's form, since it is in virtue of the form that the substance

is, perfectly and in act. The material of the natural substance is not disjoined from its form (therefore, substance is not composed of any extension). Extension—and length and width and depth—is the most prior *attribute* in it: this attribute is engendered in it, changes, increases, and decreases, like all the other attributes in the natural substance.

26 Then he investigated whether or not there is a natural bodily substance boundlessly extended in magnitude. He explained that no natural bodily substance is infinitely extended in magnitude, but that every natural bodily substance is of finite magnitude and extension. He explained that there is an infinity of the finite in in natural things, but that it has a meaning and a mode other than what infinity is believed to mean by those who have discoursed about natural things. He summed up what that meaning is, and how and in what it is.

27 Then he investigated what motion is, and its being and whatness. Since motion has a whatness that signifies its definition, and has species; since it is *from* a thing and *to* a thing, and at a distance and in time; since it is an attribute in a bodily substance; and since it exists from a mover—he had to investigate every one of these: to summarize *what* it is, *for* what it is, and *how* it is, and to make its essential consequences known. And since each of these things entails many consequences for motion, since motion entails consequences for each of these, and since motion entails consequences for the moving bodies, he began to investigate what consequence each of these entails for motion and what consequence motion entails for each of them.

Therefore he investigated what place is. He summed up the concomitants of place that adhere to its whatness. He investigated whether the body is in need of place in order to exist as body, or rather needs place to realize one of its attributes.

He investigated whether or not for motion to exist the moving thing requires void. He explained that void is not required by the moving thing or for the existence of motion; and, in general, that no void at all is required for the existence of a natural thing, be it a substance or an attribute.

28 Then he explained generally that void cannot in any way exist.

29 Then he made known what time is, and all that is concomitant to time itself, to motion, and to natural beings; and **96** whether natural beings or motion, to exist, have to exist in time, or whether time is a consequent attribute not required for the existence of any being at all.

He made known the hypotheses and rules regarding all the consequences that every one of these things entails for motion and all the consequences that motion entails for these things.

30 Then he investigated, among other things, how the whatness of motion entails that successive, periodic motion be boundless.

31 Then he gave an account of many axioms regarding bodies that follow from their motion and from the principles that move them. It follows that the moving bodies present before us are moved by other bodies that are together and in contact with them, and these in turn by others together and in contact with them, and the latter in turn by others together and in contact with them; the bodies that move each other are contiguous in their positions or in contact, succeeding each other; and this succession is infinite in number.

He had previously given an account of the modes and ways in which the natural body, by its nature, moves another body: the last of the bodies, which moves the moving things that come after it, must also be moving, but only with local motion exclusively (its local motion not being straight but circular, occupying the distance that is the circumference of all the natural moving bodies); there cannot be beyond this body another that moves it. He had previously explained also that there cannot at all be an infinite body. It follows from this that there is here a finite body that moves all the natural bodies, and that the outermost of what **97** this body includes is moving in a circular motion around the rest.

32 Then he investigated whether this body, which moves in a circular motion, moves without a mover or has a mover. He explained that it has a mover.

33 Then he investigated whether or not the principles that move the bodies moving in a circular motion by nature are themselves bodies or whether they are nonbodily essences that are, however, *in* a material and a body.

v

34 When he had investigated the case closely, it became obvious to him that that which gives circular motion to the bodies at the limits is a certain being that cannot be a nature or a natural thing, or a body or in a body, or ever in a material at all; and that he ought to inquire into it by means of another investigation and another theory, different from natural investigation and theory.

This is the sum of the axioms of natural science that he presented in a book of his called *Lectures on Physics.*

35 Then in another book he began from the final point reached in *Lectures on Physics.* This is that it follows necessarily that there is a body moving circularly at the circumference surrounding all the other bodies, and in which there is no void at all; what is inside that body is bodies that are continuous and in contact, since there is no void at all in the interval between them. **98** He called the totality containing all the bodies that are continuous or in contact the *world.* He investigated first whether the world is homogeneous or heterogeneous.

36 Then he investigated whether the sum of the bodies in the world includes certain bodies that were the first to constitute the world—so that they are the *primary parts* of the world, so that if one of them were missing the world would vanish or become defective and would not be a world. He explained that there are certain bodies that were the first to constitute the world, and that they alone are the primary parts of the world.

vi

37 When this had become evident to him, he proceeded to discourse about these primary bodies and to speak of the others posterior to them. First, he investigated how many such *primary bodies* there are among the bodies that constitute the world at the outset. Since there is among these bodies a body that moves in a circular motion around the rest, it follows necessarily that there

are first two places: a central place, and another which is around the center. It follows that the bodies that move by the most simple local motion are three: what moves about the center, what moves toward the center, and what moves away from the center; and that these three are dissimilar in their species, and in contact, since there is no void at all in the interval between them. 15

38 Then he investigated these three movements, and whether what moves away from the center is of one or more than one species. It became evident to him that it is made up of three species. He investigated each one of them, the substance of each class, and all the essential attributes in each. For each of them he gave an account of *what* it is, *from what* it is, and *for what*. He explained that they are the *simple* bodies. He explained that there are five *primary simple bodies* that constitute the world. He made known their ranks and their positions in the world, and the ranks and positions of each relative to the others. He made known the parts of all of them that have parts, and the ranks of their parts: one of them is the outermost body that moves in a circular motion: the remaining four have common material but are different in their forms: the fifth differs from these four in both its material and its form, and is the cause of the existence of these four, of their constitution, of the continuity of their being, of their positions, and of their ranks: these four are the *elements* from which all the bodies below that outermost body come into being, and these elements are also generated from each other and not generated from a body simpler than they or from any body at all. **99** 5 10 15

All this is to be found in a book of his that he called *On the Heaven and the World*.

39 Then he began, in another book, from the final point reached in *On the Heaven and the World*. This is that these four [simple bodies] are elements, they generate themselves, and they are generated from each other because they are the primary natural substances; their materials are one in species, and taken in their consecutive order, the material of each element is identical with the material of the next. Since they become elements only because each is generated from the other; since the rest of the generated bodies are but generated from them; and since there are 20 **100**

in them principles and powers in virtue of which they are generated from each other and because of which the rest of the generated bodies come into being; since it was stated [by some][1] that generation and corruption are alteration, and that generation is growing and corruption is diminishing; since, when it becomes evident what generation is, it follows necessarily that, in a thing whose parts are generated from each other, one part be acted on and another part act on it; since it follows necessarily that, in a thing one of whose parts is acted on by another, the parts be in contact; and since the things generated from these elements are but generated from the combination of these four elements, the mixture of some of them with others, and their blending together —he needed, therefore, to investigate first what generation and corruption are, in what way they take place, and in what they take place, and to show that generation and corruption are not association and dissociation. He stated what alteration is, and that it is other than generation and corruption. 5 10

40 Then he followed this with the investigation of growth and diminution. He made an exhaustive investigation of them and showed that they are other than generation and corruption.

41 Then he followed this with the investigation of the contact of bodies that act on each other and are acted on by each other. He investigated also the bodies that act on others and are acted on by others. 15

42 Then he investigated what action is and what passion [that is, to be acted on] is, and showed that they take place in sensible qualities. He explained in what way this takes place.

43 Then he followed this with the investigation of the combination, mixture, and blending by which all the bodies generated from the elements come into being. 20

vii **101**

44 When he had exhausted all of this, he investigated afterwards in what manner the four bodies[1] are elements and in what sense they are "elements": whether there are in them principles or powers by virtue of which they become elements, whether they

are elements by virtue of their substances or by virtue of natural powers in them other than their substances, whether they are primary elements or they possess other elements prior to them, and whether the powers by virtue of which they have become elements make them boundless or finite. This investigation of whether they are boundless differs from the previous investigations. For it was previously investigated in the former book whether or not each one of them is boundless in magnitude and whether or not the *primary* bodies that constitute the world are of infinite number.[2] What he investigates here, on the other hand, is whether or not they are infinite in their mode as elements and in respect to the powers[3] that made them into elements. An example of this is water, since it is one of these four bodies. For [if it is boundless], it could then have one power in virtue of which it is a single element (thus water is a single element by *this* power), and another power in virtue of which it is many elements. Similarly, water could have a power in virtue of which it is an infinite number of elements. This would be in one of two ways: either it will dissociate into waters whose number is infinite, or there will be in every water an infinite number of powers in virtue of each of which that water is a separate element. He explained regarding all this that it is impossible; they cannot be more than four; and it is because of their powers that the elements are finite in number. He investigated how many these powers are until he found their number. He made it known that these are the powers by which the elements act on each other and are acted on by each other: the first step of a thing's generation is that it act on some sensible qualities and then undergo a change in substance; but, **102** as it has become evident previously, the thing must also be acted on with respect to the qualities by virtue of which the four bodies have become elements.

45 Then he investigated whether every one of them is generated from every one, or three of them are generated from one.

46 Then he investigated their generation from each other: how, and by what mode, this takes place.

47 Then he investigated the generation of the rest of the bodies from them: how they are generated, how they are com-

bined, and according to which type of combination they are combined so that from their combination the rest of the generated bodies can come into being.

viii

48 When he had exhausted all of this, he investigated whether the powers and the principles, in virtue of which the elements act on each other and are acted on by each other, are sufficient for their generation from each other and the generation of the other bodies from them. Are the positions they occupy in relation to each other in the primary regions of the world sufficient for their combination with, and addition to, each other of themselves, so that the other remaining bodies can come into being from them? Or are they in all of this in need of another agent from outside to impart to them other powers and bring them close together so that they combine, and to provide them with principles for generating a thing other than they? He explained that they are not sufficient, in their substances or in any of their **103** states, without another agent besides them.

49 Then at this point he investigated the agent principles that supply the elements with the powers in virtue of which they act on each other and bring them close together so that they become combined. He explained that their agent principles are the heavenly bodies; and he made known how, and in how many ways, they act as agents.

50 Then he investigated what distinguishes the materials that generally constitute the generated and corrupted bodies, and showed that they are the materials of the elements exclusively.

51 Then he investigated the nature in virtue of which all that comes into being exists in act.

52 Then, after that, he investigated the end and the purpose for which these species are subjected to generation and corruption, the cause of their being generated from each other, why those of them that recur are generated from what has gone before, and why generated things succeed each other consecu-

tively. He examined the purpose and the end for which these species, to the exclusion of others, exist subject to generation and corruption.

53 Then he investigated whether corrupted things recur and thus exist again as they were, or none of them recurs at all, or some recur and others do not recur; and in what way that which recurs recurs: does it recur many times or once? and does what is generated and corrupted recur a finite or an infinite number of times? 15

All these things are to be found in a book of his known as *On Generation and Corruption.*

54 Then afterwards[1] he investigated what will now be mentioned regarding these elements. This is that since these elements are contraries (in respect of both the whatness in virtue of which they are in act and the powers in virtue of which they are elements), since they act on each other and are acted on by each other, and since they are together, it is possible that each element is [distributed according to the following scale]: (*a*) some of it is about to reach, or has already reached, the limits of perfection with respect to what renders it substantial and with respect to its essence,[2] and also has reached the ultimate and most extreme degree with respect to the power by virtue of which it is a pure element; (*b*) some of it is below the former in perfection, (*c*) some of it is below the latter, and so on—until it terminates in having the least possible degree of its essence, so that, were it to be deprived of this, its essence would become the essence of another element in the lowest possible degree in which the other can have its essence. This last will occur when it is deprived of its own essence, which can happen only in two ways. First, the material that admits what constitutes its essence will admit a little of the essence of the other, its contrary; at this stage, the action of the essence of its contrary does not manifest itself. Then it keeps admitting more of the essence of its contrary until the action it generates becomes the action of the essence of its contrary, at which point it is given the definition of its contrary rather than its own definition as before. Or, second, this [diminution of its essence] takes place without its admitting anything of the essence of its contrary. He investigated whether, when 20 **104** 5 10 15

they are still short of having their highest perfection, the elements are elements in virtue of their own powers.[3]

55 Then, after that, he investigated in what way the elements are together. Are (1) the parts of every one cut into small pieces dispersed in the intervals of the others? Or is (2) the sum of each body distinguished by a place different from the place of the other? so that (*a*) the one in the *center* is one of these four bodies, pure, and not including among its parts any part of the other three, (*b*) the one in the *upper* place of the world is also in this condition, and (*c*) the one in the interval *between* the upper and the center is also in this manner: so that the body in contact with the heavenly bodies is one of the elements, the one below it and together with it is another, and similarly until they terminate in the lowest place, which is the center. Or does the latter alternative—were it possible—require that the parts of each element be also in the parts of every one of the others, and that the parts of the one element be in each other? He explained that they are together in the two ways. 20 **105** 5

56 Then he explained in what condition the body in contact with the heavenly bodies ought to be. He explained that it ought to have the purest essence and come close to being endowed with the extreme of essence and power: the body that is *there* must be the lightest, the most intense in heat and dryness, and the least mixed with others; then the next element together with [that is, next to] it must be less extreme in its essence and power, indeed it must not be of extreme but rather of defective essence and incomplete power; and then the nearer it is to the center, the less should be the power in virtue of which it is an element and the essence that renders it substantial. 10

57 Then he required that the element together with [that is, next to] the latter be related to it in the same manner, until they terminate in the element in the center. He required that this last one, especially, ought to be the most defective and the most mixed with others, so that the three elements be mixed with it in many types of mixtures. He gave an account of the cause of all this with respect to the heavenly bodies, which are their agents, and with respect to the material and whatever inheres in it. 15 20

58 Then he explained that these theoretical requirements

are in agreement with what is found out about the elements by observation.

59 Then he investigated afterwards what one ought to **[106]** call these elements if they are pure, having the essence belonging to them alone (without their contrary being in any way mixed with them), and are most extreme in the powers in virtue of which they are elements. He did not find names by which to call them, and found the generally accepted names to be the names of the substrata that belong to these elements mixed with others. Whereupon he inquired about the species of the "elements" that have generally accepted names, and whenever the local motion of one of these species was close to being the local motion of a certain element, or its sensible qualities close to being the qualities of a certain element, he transferred to the sum of that element the name of the corresponding species. He called the body that is together with [that is, next to] the heavenly bodies, *Fire;* and he made it known that it is not this fire that we have. For *fire* is applied to flame and ember by the multitude, not to anything else. But since the movement of flame, especially, is a movement that aims, as it were, at burning air in order to ascend above it, he therefore called the body floating over the rest of the elements (that is, that which has one of its two surfaces contiguous to the concave of the heavenly bodies) by the name *Fire*.[1] He called the body that is below it by the name *Air,* that which is below it by the name *Water,* and that which is in the center by the name *Earth*. All the elements are associated in the body that is in the center, that is, earth; that is required theoretically and is evident by observation. Since mixture is of two types, *Earth* is mixed with the rest of the elements according to both of the two types. *Water* also is mixed with *Earth* and *Air* in both ways; its mixture with *Fire* is not noticeable, however; yet it is required that it be mixed with it also. *Air* is inferior to *Water* in this respect, and *Fire* is inferior to them all in its mixture with the others. These, then, are things of which he made an exhaustive investigation.

60 Then afterwards he investigated their primary mixtures **[107]** (in which neither of the two mixed elements abandons its essence), and he investigated the species of such mixtures. Since the mixtures from them are almost infinite, he did not find names for them, not even for the ones that are evidently distinct from each other, except for a few of their species, such as *vapor, smoke, flame,* and the like.

ix

61 When he was forced to find names for many of them, he had to call each by the name of the element that predominates in its essence: thus that in which *Air* predominates, he called *aerial;* that in which *Fire* predominates he called *fiery;* that in which *Earth* predominates he called *earthy;* and that in which *Water* predominates he called *watery*. He went on to distinguish the different names for them by means of the *differentia* inherent in them: some, by means of their local motions, and others by means of their sensible qualities; where two of these associate in combination, he combined the names, such as *watery-earthy* and the like.

62 Then, after this, he investigated the attributes and affections engendered in these four bodies whose condition he had stated. He gave an account of their essences and material constituents that admit those affections; and he made known their agent causes and principles: those that exist in the element together with the heavenly bodies, those in air, those in water, and those in earth.

63 Then he investigated whether these elements exist for the sake of themselves because they are among the things by **[108]** which the being is rendered perfect; or whether they were made in order that the other generated bodies be produced from them; or for the two things together, so that they are everlasting because they are parts of the beings and complete the whole, and are concomitantly elements whose combination with each other gives rise to all generated bodies. He investigated also whether or not the attributes and affections generated in them are intended directly for certain purposes and ends, or follow as consequences and concomitants of things that in turn are engendered for certain purposes, or are only excesses and infirmities that do not

follow as consequences of a purpose or for the prevention of a purpose, so that their excess is like having an additional finger on the hand, while their lack is like being deprived of a finger.

All these things are to be found in a book he called *Meteorology*, especially in the [first] three treatises of this book.[1]

64 Then afterwards he set out to conduct a general inquiry into the bodies that originate in the combination of these four elements with each other. In general, the bodies that originate from their combination are of two types: the one is the homogeneous, the other the heterogeneous. Heterogeneous bodies originate only from that combination of homogeneous bodies in which the essence of every one of the latter bodies is preserved: it is the combination of being together and in contact. As to the homogeneous bodies, they originate only from that combination in which the essence of every one of the parts is not preserved in the way explained by him previously: it is rather the combination in which the parts blend together as a result of acting on each other and being acted on by each other. In turn, homogeneous bodies are of two types: those that only form parts of a heterogeneous body, and those every one of which is generated to form a part of nothing other than the sum of the world, the sum of the generated bodies, or the sum of a certain genus or species.

First, he began to investigate how the homogeneous bodies are generated from the elements; how an element associates with another; and which of the combined elements functions as the agent, by which of their powers some elements come to function as the material, by which power some of them function as the agent, and which of the qualities in them lead to their generation. He also summed up these same ideas regarding their corruption. And he explained the kinds of affection that lead to their generation, the kinds of affection that lead to their corruption, and the place where this occurs. From his previous arguments, it became evident to him that the place must be the center and what is next to the center of the earth, inside it, and on its surface.

65 Then he set out to enumerate the tactile qualities present in homogeneous bodies and in the combined parts that adhere to the primary powers because of which the elements act on each other and are acted on by each other, and because of which some elements admit action and other elements act on what admits action. He closely investigated the tactile qualities whose existence in the compound body adheres to the active powers of the elements, and the ones that adhere to the powers in virtue of which bodies come to be acted on.

66 Then he intended to investigate all the particular qualities perceived by the other senses. However, it seemed to him, or rather he was of the opinion, that in many of them it is not sufficient to consider them as reflections of the powers because of which the elements act on each other; no, they require other powers of the elements or powers that proceed from the actions of other bodies. Therefore it seemed to him that he should postpone the inquiry into them to another place in natural science: that is, the place where one investigates sense-perception as integrated with sight, with hearing, or with the other senses; for colors require rays in order to exist and, with the exception of the tactiles, the other sensibles require air and water.[1]

All these things are to be found in the fourth treatise of the book that he called *Meteorology*.

67 Then he followed this by the inquiry into the homogeneous bodies that are generated from the elements and that are not parts of heterogeneous bodies: that is, stones, bodies consisting of stone, and the like. He investigated in this connection the earth and its parts and the classes of common vapors. Among the latter, he distinguished what is fiery, what is aerial, what is watery, and what is mixed with many things belonging to the parts of earth; and the hot vapors among which some incline, further, more to dryness, some incline more to moisture, some are clearer and thinner, and some possess more smokiness. (It seems that these are the vapors that join themselves to the *internal* heat that ripens the bodies inside the earth and on its surface, and are mixed of water and earth or of the moist and the dry, the sum of which is what admits being acted on by the hot and the cold—the two agent powers of the homogeneous bodies.) He explained that the primary causes for the generation of these different vapors inside the earth are, first, the heavenly bodies, and next, the air that chances to be together with the earth and is heated or cooled by the heavenly bodies.

68 Then afterwards he set out to explain the classes of what inheres in every mixed earthy part and thus gives rise to the various types of stony and mineral bodies in the depth of the earth and on its surface. He had to enumerate here such species of them as have been observed and such attributes as have been observed to exist in them and in each of their species. Once these were distinguished from each other, he proceeded to give an account of the essence of each of their materials and forms, and to give an account of the agent principles of each of these things or of the principles that act on the essences of their attributes, the agent principles of each one of these attributes, and the ends for the sake of which each one of them is generated. However, since it is not easy to give an account of the ends unless one knows beforehand the end of the totality of the world, he postponed the inquiry into their ends to the science in which he would investigate the ultimate principles of the world.

All this is to be found in a book of his that he called *On Minerals*.[1]

69 Then afterwards he proceeded to inquire into the heterogeneous natural bodies. He began with the plants before the animals. First, he enumerated what is known about them by sense-perception and observation. He enumerated each species. He enumerated what can be observed from the enumeration of every species, and the attributes that can be observed in each species and in each part of every species, until he exhausted all of them or whatever was available and known to him.

70 Then, after that, he proceeded to state the end for the sake of which each organ of every species of plants is generated.

71 Then, after that, he investigated the generation of each species of plants. He gave in every one an account of the material from which it is generated and the agent through which it is generated, until he exhausted everything natural about plants. He did the same regarding the attributes that exist in each.[1]

72 Then, after that, he proceeded to inquire about animals. First, he took what can be known about animals by observation and sense-perception. He enumerated the species of animals, or the ones known to him.

73 Then he enumerated the organs of each species. He

explained, regarding every species, of how many organs it is composed. He enumerated what can be observed about each organ. And he enumerated also what can be observed about the attributes of each species of animals, and the acts that each species performs in the things it manipulates.

X

74 When he had exhausted all of this, he suddenly saw that nature and natural principles are not sufficient in most matters relating to animals and in many matters relating to plants; no, in addition to nature and the natural principles, one requires another principle and other powers of the same kind as this other principle; this principle should have the same place in animals and in many things belonging to plants as nature in natural beings. Thus while in many things belonging to animals he had to give an account of their principles based on nature, in many other things the account of their principles had to be based on this other principle. He called this other principle the *soul*. He stated that plants are plants by virtue of the soul, and animals are animals by virtue of the soul. He called the principles that are of the same kind as the soul, the *animate* [or *psychical*] principles and powers.

First he began to investigate everything that belongs to animals by nature (for he had previously summed up what nature is and what natural principles are), and to give an account of all that belongs to animals by nature. He investigated first the natural ends for the sake of which every organ of every species of animal is generated by nature. In every one of them, he gave an account of the nature that admits its essence: that is, the materials from which every species of animal is generated. He made known the natural agent principle of every species of animal. And in every one of them he gave an account of the nature in virtue of which it is a natural substance, and of the end for the sake of which all that belongs to it by nature is generated.

It became evident to him from this that natural bodies are of two types. The first is the type rendered substantial to the utmost by the nature that is the *essence* of each natural substance. The

second is the type rendered substantial by nature in order that its substance (that is, its nature in act) be a beginning—in the way of preparation and matter, or in the way of instrument—for another principle, which is thus related to nature as the natural form is related to its material or to the powers that are its instrument. This other principle is the soul.[1]

xi **114**

75 When he had come to know this, then he had to investigate what the soul is, just as he had investigated previously what nature is; and he had to know the psychical powers and the acts generated from the soul, just as he did with regard to nature. He proceeded to do so with the intention of knowing *what* the soul is, and *by what* and *how* it is. He investigated whether it is many or one—if it is many, in what way is it many: does it have many parts or many powers? and if it has many parts, in what way are its parts many: are they in many places, materials, and bodies dispersed in many places? are they many in the manner in which the parts of the same homogeneous or heterogeneous body are many? or are its parts many in another manner?—and what are the powers and principles of the soul.

He began to investigate what the soul in general is, just as he investigated what nature is. He explained that the essence of the *animate* natural substance is constituted by the soul, just as the essence of the natural substance is constituted by nature; the soul is that by which the animate substance—I mean that which admits of life—is realized as substance; and the soul, like nature, combines three aspects of being a principle: it is a principle as an agent, it is a principle as a form, and it is a principle as an end. All that was said of nature as a principle and as a substance ought to be transferred to the soul. But as to whether the soul is a substance as a material, there is some doubt that has not as yet been clarified. For in the case of nature, it had become evident that it is a principle in all four respects; and now it has become evident that that nature which is the essence by which substance **115**

is first realized as a bodily substance in act is also the material of the soul.

76 Then he made known the animate powers in the same way in which he had made it known that the natural powers by which nature acts, and the natural bodies whose action is by nature, are instruments of nature. Just as there may be a certain nature that is an instrument of nature, a nature that is subservient to another nature, and a ruling nature using the nature that is either subservient or an instrument, there may likewise be a ruling soul and another soul that is either subservient or an instrument. There are thus two types of natural bodies: a type rendered entirely substantial by nature, and a type not rendered substantial by nature, but prepared by nature as a material or instrument for the soul. That by which the latter is rendered substantial, after having been rendered substantial by nature, will be the soul. The natural substance that admits of soul will thus be the material of the soul; and nature will be either a preparation, a material, or an instrument to be used by the soul in its acts. Thus there will be two types of nature in animate substances: a type that is a material, and a type that is an instrument. Hence in the animate substances nature is not for its own sake but for the sake of the soul.

Therefore, just as he distinguished in natural things between the nature that rules and the nature that is either subservient or an instrument, he distinguished likewise among all of these in the soul. And just as he made known the actions generated from nature, and the attributes that adhere to the natural substances and are generated in them from nature, likewise he made known the acts generated from the soul and the attributes that exist in animate substances—insofar as they are animate—and are generated in them from the soul. Since some of the attributes generated in natural substances are in them on account of their materials and others on account of their forms, the attributes in **116** animate substances are divided likewise in the same way: some of them exist in animate substances—insofar as they are animate—on account of their specific materials and others adhere to them on account of their form, that is, the soul.

Therefore he began to investigate first the most prior act of

soul: that is, nutrition and what follows nutrition. He investigated in virtue of which power and part of the soul nutrition takes place, and he distinguished between that which rules and that which is instrument and subservient in this respect. He investigated the natural bodily instruments employed by this soul or this power in its actions. He investigated the natural instruments, e.g., heat and cold, employed by this soul in its actions. He investigated its acts, of how many species they are, what each of them is, of what it is composed, for what each act is utilized, and how each organ ought to be if it is to be utilized in each one of the acts of this soul by each of the species of animals.

77 Then he investigated the nourishment on which this soul or this animate power acts, and how it receives some of it from the first elements themselves (because of what nature—that is, the elements—prepared with the assistance of the heavenly bodies), and the rest from other things beyond the elements. He explained by what plants are nourished and by what animals are nourished; and that, of the animals, some eat each other, others eat the plants, others eat what is similar to that by which plants are nourished, and still other animals combine all or most of this nourishment.

78 Then he investigated whether the species of bodies that have become nourishments are at the outset made by nature for the nourishment of animals and plants; or whether such bodies are generated for their own sake as parts of the world, but as they become suitable for the nourishment of animals and plants they are used as nourishment merely because they happen to be suitable, or whether it is not by chance that these things are nourishments for animals and plants; or whether their generation for their own sake or as a part of the world is such that their perfection and purpose consists in their being for the sake of the things nourished by them. He investigated closely; for this investigation of these things is similar to the preceding investigation of whether the elements are for their own sake or for the generation of other bodies.

At first he made an imperfect investigation here of these things. For it was denied him to go beyond this in the study of the world. Hence he abandoned them and proceeded to other things.[1]

He investigated health and disease and the species of each.

He proceeded to look into each of the species of health and of disease: what causes its occurrence, for what and in what thing it occurs, and from what it occurs. For health and disease inhere in the animate substance because of their nature and natural powers, which pertain specifically to what is animate. Therefore one may consider their primary principle to be the soul. For the soul itself is the cause (as the end and, with the help it receives from nature, as the agent) of having this specific material present in the soul. And nature, and the specific difference by which the material has been prepared, and the natural powers that *now* belong to that nature by which the material is prepared for the specific difference, all belong to a thing possessing a soul. It is in this way, then, that all these are referred to the soul as both their agent principle and their end.

That is to be found in his book *On Health and Disease*.

79 Then he investigated the transformation of animals from one age to another, which inheres in the animate substance because of its specific nature.

80 Then he investigated each of the ages of the animate substance and the attributes that, in each of its ages, inhere in it because of the specific nature and natural powers of the animate substances.

That is to be found in his book *On Youth and Old Age*.

81 Then he investigated the long life of the species of animals that are long-lived, or the short life of those of their species that are short-lived. He investigated its causes and its natural and animate principles.[1]

82 Then, after that, he investigated life and death: what each of them is (that is, the continuous existence and the corruption of animals with respect to their soul), and from what, in what, and for the sake of what it takes place.

All these acts and attributes proceed from a soul or an animate power similar to nature and close to it in its substance and essence, but which is not nature. For it is present both in plants and in animals, and plants are as it were intermediate between animals and stony bodies. (There are some who are uncertain whether plants belong to animate or to natural things, and many tend to

attach them to the animals.) Therefore this soul, or this particular power of the soul, is close to nature.[1]

83 Then, after that, he investigated sense-perception (and the senses) as a part of a soul or of an animate power. He investigated the states of each of the senses, and the subjects on which the senses act—that is, the sensibles: what each of them is, how many species each of them has, what each of its species is, and in what, from what, and for the sake of what it is.

84 Then he investigated closely the natural organs in which these senses are and by which they sense (some of these organs are the materials of the senses and others their instruments): how the nature of each of those organs ought to be, and what natural powers and attributes ought to be in each. He studied by induction every organ in which the senses and their acts reside. And he gave an account of the causes of what resides in them based on this part or this power of the soul.

That is to be found in a book of his that he called *On Sense and the Sensible.*

85 Then, after that, he investigated the classes of local motions that result from the soul in the bodies that breathe: what they are, the character of each of their species, by means of which instruments and organs they take place, and through which power of the soul they take place, just as he had investigated the local motions that result in natural bodies from nature. He enumerated the organs equipped for such motion in every species of animals. He gave an account of the principles (whether a nature, natural powers, or natural attributes), of all the things present in each of these organs, and he gave an account of their causes and principles in respect of these powers or this part of the soul. These motions are the ones by which animals labor in the pursuit of a thing or in flight from a thing.

It is at this point that he had to investigate the localities of animals and the localities of each species of animals, for what animals need a locality, and what the locality suitable to each animal is. For in some localities animals labor in the pursuit of their nourishment; in others animals take refuge to keep themselves safe at the times and under the conditions in which they cannot or need not labor, or to keep themselves safe against an

enemy; and in still others they keep their offspring and rear them. Many animals require localities for the safekeeping of their nourishment; these are the animals that have to keep provisions for a long time to come, for some keep their provisions while others acquire their nourishment day by day.

That is to be found in his book *On the Local Motions of Animals.*[1]

86 Then, after that, he investigated what respiration is, by means of which organs it takes place, how it takes place, and for the sake of what and through which power of the soul it takes place.[1]

87 Then, after that, he investigated what sleep and walking and dream-vision are, in what they take place, how they take place, and for what reason and because of which power of the soul they take place.[1] He investigated the classes of dreams and dream-visions, and their causes and principles.[2]

He investigated the dreams that warn of future events, and he investigated the mode of interpreting dream-visions.[3] But the investigation here made him stop short, because he saw that neither the soul alone, nor the soul together with natural powers, is sufficient to explain the dream-vision that warns of future events. This requires other principles with a rank of being higher than that of the soul. Therefore he postponed its investigation and exhaustive treatment.[4]

88 Then he examined memory, remembering, forgetting, and recollection: what each of them is, how it takes place, and in virtue of which power of the soul it takes place.[1]

He investigated also the faculty of the soul that produces the cognitions that belong to the classes of animals devoid of intellect, and he made known that for the sake of which they are.[2]

xii

89 When he investigated these things insofar as they are common to the species of animals other than man, he confined himself to giving an account of their principles and causes on the basis of the soul and the animate powers.[1]

xiii

90 When he investigated these identical things in man, he saw that in man the soul alone is not sufficient for giving an account of their causes. For observation shows that in man these things are an equipment for acts that go beyond, and are more powerful than, the acts of the soul. He found in man other things not present in the rest of the animals, whose causes and principles cannot be either the soul or the animate powers. Were one to examine the nature and the natural powers that are in man, he would find them equipped for acts that go beyond, and are higher than, the acts of nature and the acts of the soul. Were one to examine the soul and the animate powers in man, he would find them insufficient for rendering man in the highest degree substantial. He was therefore forced at this point to investigate for what these other things are made. He found man with speech, and speech proceeds from the intellect or the intellectual principles and powers.

Therefore he was forced to investigate what the intellect[1] is (just as he had investigated what the soul is and what nature is), whether the intellect is indivisible or divisible like the soul, and whether it has parts or powers. It became evident to him that the intellect is like the soul and nature; the intellect is divisible into parts or into powers; it is a principle underlying the essence of man; it is also an agent principle; it is a cause and a principle as an end like nature; and the intellect and the intellectual powers are to the soul and the animate powers as the soul and the animate powers are to nature and the natural powers. Just as natural substances were of two types—one rendered entirely substantial by nature and another that nature renders substantial as an equipment (a material or an instrument) for the soul—the animate substances are likewise of two types: one rendered entirely substantial by the soul and another that the soul renders substantial as material or instrument for the intellect and the intellectual powers. He investigated whether the intellect is divisible like the soul and nature into a ruling part and a subservient part. And he investigated which intellectual power is for which, and whether the intellect is for the soul and nature, or whether both nature and the soul are for the intellect.

Therefore he had to investigate the acts of the intellectual power and the acts of the intellect in general. Everything whose substance is not identical with its act is not generated for its own essence but for its act. It has become evident [from the study of nature and the soul] that the intellect in virtue of which man is finally rendered substantial is an intellect in its first perfection. Now what is in its first perfection is still in potentiality, and the potential is generated for its act; and this is precisely the thing whose substance is not identical with its act.

xiv

91 When he investigated the acts of the intellectual powers and the acts of the intellect, he found that all of their acts consist in rendering the beings intelligible to the intellect. However, he found that some intelligibles are perceived only to the extent that enables man to bring them into actual existence outside the intellect in natural things;[1] there are others that cannot be brought into actual existence by man; and of some of those that can be made to exist, the intellect has a kind of perception that exceeds the measure required and useful for their existence. He called the intellectual faculty that perceives the beings that can be brought into actual existence in natural things by man—provided he has that kind of intellectual perception of them that is useful to him in making them exist—the *practical* intellect; and the faculty that perceives the intelligibles in a manner not useful to man in the sense that he can make any of them exist in natural things, the *theoretical* intellect.[2] And he called the intellectual faculty by which what has been acquired by the practical intellect can be made to exist in natural things, *volition* and *choice*.[3]

xv

92 When he investigated the last two intellectual faculties, he found that they are subordinate faculties with subservient acts. He investigated the things in which they serve. He found that they serve primarily natural and psychical things belonging to man;

however, they are not things that can exist in man for their own sake, but only so that he may attain intellectual perfection. He investigated the intellect for which such natural and psychical things have been provided at the outset, whether they are for the sake of that part of the intellect [that is, volition and choice] that serves them, or whether the intellect serves them in this manner only to serve something else or a certain intellect other than the subordinate part. He investigated whether the subordinate part performs its service having its own essence as the end, or the things that it serves. It became evident to him that it is not possible that its end be those things that it serves; no, these are used only as materials or instruments, while it itself rules and uses them. He investigated whether its rulership is such that it could not serve anything else. He found that all of its acts are such that they need not serve anything else. Therefore it became evident to him that if it exists merely for the sake of this kind of activity, its nature—and its essence and substance—could not enjoy supreme rule or be the highest.

Thus he investigated the theoretical part of the intellect. He found that the intelligibles acquired by this intellect are intelligibles with which it cannot at all serve something else; and he found that, when this intellect is realized in its final perfection, it will be realized as an intellect in act after having been potential. Therefore he laid down that it had been realized in act and that it had acquired the intelligibles. He investigated in what way and in what mode it acquires the theoretical intelligibles as intelligibles in act. He laid down that they may be acquired in the highest possible degree, and that it may acquire its final perfection beyond which no further perfection can be acquired. Therefore he found that, when it is such, its substance is identical with its act or comes close to being its act.

xvi

93 When he had found this to be the case, and that the intellect could not enjoy another existence more perfect than this one that renders it entirely substantial, he realized that this is

the final thing that renders man substantial, and that when the substance of man is realized in that final perfection beyond which it is impossible that there be further perfection, the substance of this part comes close to being identical with its act. It follows as a consequence from this that the ends pursued by the intellectual faculties, whenever they serve anything, are pursued for the realization of this part of the intellect, which is the theoretical intellect. This intellect is the substance of man. If at the outset his substance is not identical with his act, and it becomes so only through the intellect when the substance of the intellect comes close to being its act, it follows as a consequence that the other faculties—that is, the practical intellectual faculties—have been realized only for the sake of this part, and that the soul and nature were made only so that this part of the intellect be realized, first in potentiality, and subsequently in its final perfection and most completely.

94 Then, after that, he investigated whether it is possible that nature and the soul be sufficient for reaching this perfection. He explained that nature and the soul cannot be sufficient for man to reach this perfection, but that he needs the two practical intellectual faculties [that is, volition and choice] in addition to the soul and nature and their acts.

xvii

95 When he had finally inquired into this matter, he turned once again to the things he had investigated with reference to what man is by nature and what exists in man because of the soul:[1] he gave an account of their causes based on these intellectual faculties, since those things are provided—either as material or as instrument—so that the practical intellectual faculties can employ them in order to realize the theoretical intellect in the most perfect way in which this is possible.

96 Then he investigated whether the animate substances other than man exist for utilization by the practical faculties in perfecting what man is by nature and what belongs to man because of the soul and to equip both for attaining this perfection; and whether those animate substances are *provided* for the sake of

these practical intellectual faculties, or whether this happens by chance. This investigation is identical with the investigation whether the elements are provided for the sake of all that is generated from them, whether the natural substances are provided for the animate, and whether the animate substances are provided for the intellect and the intellectual powers.[1]

xviii

97 When he investigated these matters, however, what he was looking for became clear to him only in part; he encountered a difficulty with respect to the rest because he had not yet pursued another investigation. That is, what is acquired upon the perfection of the soul and its faculties, prior to the contribution made by the practical faculties, is the potential intellect, and this potential intellect is there on account of the service it renders to the intellectual faculties. Therefore he investigated whether the service rendered by those two [that is, nature and the soul] is sufficient, in the absence of another principle, to attain the perfection of the theoretical intellect. It became evident that this is impossible and that it is insufficient: the actual intellect requires something else. This need is not only felt in respect of the theoretical intellect: the practical[1] faculties too require other principles. For no intelligibles could be acquired by the practical intellectual faculty or by the theoretical faculty through volition and reflection, if these were not already equipped with primary intelligibles, which are principles by nature used in acquiring these other intelligibles.

Therefore he had to investigate now whether these primary intelligibles are eternally in the potential intellect. But how is this possible when the potential intellect is not eternal? It follows then that these primary intelligibles (which are in the potential intellect by nature and not by volition), did not exist at first, and that subsequently the potential intellect came into perfect possession of them. And it had become evident in general that the potential cannot move to act except through an immediate agent of the same species as the thing that is to be realized in act, from which it follows necessarily that there is here a certain intellect, uncom-

pounded and in act, that has engendered the primary intelligibles in the potential intellect and has equipped it by nature to receive all the other intelligibles.

xix

98 When he investigated this intellect, he found that it is an intellect in act, had never been potential, and has always been and will always be (what has never been potential is not in a material, its substance and act are identical or close to being identical); when the human intellect achieves its ultimate perfection, its substance comes close to being the substance of this intellect. He called this intellect the *Active Intellect*. And it became evident to him that in achieving the perfection of its substance, the human intellect follows the example of this Intellect. This Intellect is the end because its example is followed in this manner, it is the most perfect end, and it is the agent. It is thus the principle of man as the agent, ultimately, of that which renders man substantial insofar as he is man. It is the end because it is that which gave him a principle with which to labor toward perfection and an example to follow in what he labors at, until he comes as close to it as he possibly can. It is, then, his agent, it is his end, and it is the perfection the substance of which man attempts to approach. Hence, it is a principle in three respects: as an agent, as an end, and as the perfection that man attempts to approach. It is therefore a separate form of man, a separate end and a prior end, and a separate agent; in some manner, man becomes united with it when it is intellected by him. And it became evident that the thing whose very substance and nature are nothing but mind can be intellected and can exist outside the intellect—there is no difference between these two modes of its existence. Hence it became clear that it is intellected by man only when he is not separated from it by an intermediary. In this way, the soul of man itself becomes this Intellect. Since the human soul is for the sake of this Intellect, the nature by which man acquires what is natural to him is for the sake of the soul only, and the soul is for the sake of the theoretical intellect in its highest perfection, it follows that all

these things belong to man so that he may attain this rank of being.

At this point Aristotle returned once again to investigate those matters that had escaped him,[1] in many of which he now detected the causes of the difficulties.

99 Then he investigated whether the Active Intellect is also the cause of the existence of nature and natural things and of the soul and animate things. It had become evident to him that the heavenly bodies are the principles that move the elements and the other bodies.[1] Therefore he investigated whether the Intellect assists the heavenly bodies with respect to the existence of the beings encompassed by the heavenly bodies: that is, he had to investigate whether the heavenly bodies are sufficient for the beings to be realized, some possessing a nature, others possessing a soul, and still others possessing an intellect. As for possessing an intellect in act, it had become evident that the heavenly bodies are not sufficient without the Active Intellect;[2] and it had become evident with respect to what acquires its perfection from the Active Intellect, that its movement is supplied by nature and the soul with the assistance of the heavenly bodies. Furthermore, many things possessing soul supply a soul to the materials they encounter, provided these materials are equipped by nature to receive it: a man is begotten by a previous man, thus man is from man, and likewise most animals and most plants. (In the case of animals there are some that are not generated from animals, and some plants are not generated from plants; and minerals are not generated from others of the same species as they.)

Therefore he had to investigate these things. But he had to go beyond this and investigate what at the outset supplied "humanity" in general, "donkeyness" in general, and the form of each species whose particular instances then came to be generated from each other; for what are generated are only the particular instances of each species.[3] He had, then, to investigate what supplied the form of that species, and, more generally, what supplied the forms of the species, whether the heavenly bodies or the Active Intellect, or whether the Active Intellect supplied only the form and the heavenly bodies supplied the motions of the materials. For up till now it had not become evident that the heavenly bodies supplied the natural bodies with anything besides motion.

Therefore he had to investigate also whether the substances of the heavenly bodies consist of a nature or a soul or an intellect, or something else more perfect than these. These matters are beyond the scope of natural theory. For natural theory includes only what is included in the categories; and it has become evident that there are here other instances of being not encompassed by the categories: that is, the Active Intellect and the thing that supplies the heavenly bodies with perpetual circular motion.

Therefore he had to inquire into the beings in a way more inclusive than natural theory. For his investigations in natural science made it evident that, in the end, natural theory terminates in the Active Intellect and the mover of the heavenly bodies, and then stands still. Further, the sum of the preceding inquiry has led to the conclusion that that nature which is in man, and the human soul, the powers and the acts of these two, as well as the practical intellectual powers, are all for the perfection of the theoretical intellect; and nature, the soul, and the psychical intellect[4] are insufficient without the acts generated from volition and choice, both of which adhere to the practical intellect.

Therefore he had also to investigate the acts generated from the will, volition, and choice, which adhere to the practical intellect—for it is these that make up the *human* will. This is because desire and the things adhering to sense-perception and discernment, which are possessed by other animals, are neither human nor useful for achieving theoretical perfection; for no other animal is equipped to achieve theoretical perfection. Therefore he had to investigate all the acts generated from volition and choice. For choice means the will that adheres to the practical intellect; therefore comparable things in other animals are not called *choice*.

Therefore he had to inquire into, and to investigate, the acts generated from these, and distinguish the acts useful for the ultimate purpose from those that obstruct the way to it. He had to investigate also the natural things, whether instruments or a material, useful in making up these acts. Hence he had to investigate also that nature which is useful for the animate substances of animals and plants, and bring into existence[5] those of them that contribute to the acts leading or proceeding to human perfection. He had to investigate also the other natural beings—whether

stones, minerals, or elements—and bring into existence what is useful; and likewise bring into existence also those useful things among them that have the heavenly bodies as their causes, and use them. However, how to use such things, and the different ways in which to use them with respect to animals, plants, and so on is open to discussion; indeed, were man to make a thorough investigation, he would find that it cannot be made evident either in natural science or in human science without completing the inquiry 20 into, and the investigation of, the beings that are *above* things natural in their rank of being.[6]

Therefore he had to give precedence to that inquiry in order to achieve a more perfect knowledge of natural things and com- **132** plete the natural *philosophy,* and the political and human *philosophy,* which they lacked.[7]

Therefore Aristotle proceeded in a book that he called *Metaphysics*[8] to inquire into, and to investigate, the beings in a manner different than natural inquiry.

* * *

It has become evident from the preceding that it is necessary to investigate, and to inquire into, the intelligibles that cannot be utilized for the soundness of human bodies and the soundness of 5 the senses; the understanding of the causes of visible things, which the soul desired, is more human than that knowledge that was construed to be the necessary knowledge.

It has become evident that that necessary knowledge is for the sake of this understanding; the knowledge that of old we used to suppose as excellent is not, but is merely *necessary* for rendering man substantial or making him reach his final perfection. And it 10 has become evident that the knowledge that he [Aristotle] investigated at the outset just because he loved to do so, and inspected for the sake of explaining the truth about the above-mentioned pursuits, has turned out to be necessary for acquiring the intellect for the sake of which man is made. The knowledge that comes next is investigated for two purposes: one, to render perfect the human intellect for the sake of which man is made, and second, to perfect 15 our defective natural science, for we do not possess metaphysical **133** science.

Therefore philosophy must necessarily come into being in every man in the way possible for him.

Notes

Part I: THE ATTAINMENT OF HAPPINESS

(1) 1. For a more elaborate statement on the distinction between "this" and the "other" life and the relation between them, see, e.g., Alfarabi, *Aphorisms of the Statesman* (*Fuṣūl al-madanī*), ed. and tr. D. M. Dunlop (Cambridge, 1961), secs. 25, 76; cf. *On the Intellect* (*Risālah fī al-‹aql*), ed. Maurice Bouyges (Beyrouth, 1938), sec. 44.

2. Below, sec. 26.

3. Aristotle *Nicomachean Ethics* i. 13, vi. 1. 1138b35 ff., vi. 2–13, *Magna Moralia* i. 1. 1183a15 ff.; Alfarabi, *Statesman*, secs. 6–7, *Intellect*, secs. 9–11. For the transition from ethics to logic and the theory of demonstration, consider, e.g., Aristotle *Nicomachean Ethics* vi. 3 (*Posterior Analytics* i. 1).

(2) 1. See below, secs. 46 (where the theoretical virtues are again asserted to be sciences), 53 (38:19). Cf. Aristotle *Magna Moralia* i. 34. 1197a16–19.

2. For the two kinds of knowledge, see Aristotle *Posterior Analytics* i. 1, ii. 9, *Nicomachean Ethics* vi. 6; Alfarabi, *Intellect*, sec. 8.

3. These terms do not seem to be employed here in their technical sense. Alfarabi, *Logic* (*Manṭiq*), MS, Ḥamīdiyyah (Suleymania, Constantinople), No. 812, fol. 112*r;* Aristotle *Posterior Analytics* i. 33.

4. Below, III, sec. 3 (63:4–10).

(3) 1. Section 4, below, specifies four of these methods: the apodictic, sophistical, rhetorical, and poetic.

2. Alfarabi, *Enumeration of the Sciences* (*Iḥṣā› al-‹ulūm*), ed. Osman Amine (2nd ed.; Cairo, 1949), ch. 2 (53–58).

(4) 1. Alfarabi says: "all these methods are *technical* [in character] (*ṣinā‹iyyah*)."

2. Alfarabi, *Enumeration of the Sciences*, ch. 2 (58–60).

3. Below, II, secs. 7–12, III, secs. 3 (70:15 ff.)–16; cf. Aristotle *Topics* i. 1.

(5) 1. For the source of the distinction between the "principle of instruction" and the "principle of being," between "what is better known to us" and "what is better known by nature," or between the *causa cognoscendi* and the *causa essendi*, consider Aristotle *Physics* i. 1. 184a16–23, i. 5. 189a4 (cf. *Posterior Analytics* i. 2. 71b34–72a6), *Nicomachean Ethics* i. 4. 1095a30 ff., vi. 3. 1139b25 ff. Alfarabi, *Logic*, fols. 76*v*–77*r;* below, III, secs. 7, 22.

2. Aristotle *Posterior Analytics* i. 2, 7, 9.
3. See below, sec. 6.
4. Aristotle *Posterior Analytics* i. 13, ii. 1–2; Alfarabi, *Logic,* fols. 62*v*–63*r*, 94*r*. Below, secs. 8, 11, 15.

(6) 1. These are the four ways of interpreting and asking the question *why* (above, sec. 5). Aristotle *Posterior Analytics* ii. 8–11, *Metaphysics* i. 3, v. 2, *Physics* ii. 3, 7. Below, III, sec. 7.
2. I.e., in what form or shape or state. Alfarabi, *Logic,* fol. 94.
3. Cf. Aristotle's enumeration of the causes in *Posterior Analytics* ii. 11. 94ª20–23. It is perhaps of some importance that Alfarabi first presents a tripartite division and then states that the central question signifies *both* the material and efficient causes.
4. These are the first two meanings of *from* (or *out of*) enumerated by Aristotle in *Metaphysics* v. 24, cf. v. 2.
5. Cf. Aristotle *Metaphysics* xii. i. 1069ª30 ff.
6. Below, secs. 11 ff.

(7) 1. Aristotle *Posterior Analytics* i. 28. 87ª38–ᵇ4, *Metaphysics* iii. 1 ff., iv. 2.
2. Cf. above, sec. 6, below, sec. 11. The emphasis here seems to be on the fact that one may *find* only "two" principles. Cf. Aristotle *Physics* i. 6.
3. For examples of this procedure, see below, III, secs. 66, 74, 78, 90, 95, 98.

(8) 1. I.e., the principles of being.
2. Cf. Aristotle *Posterior Analytics* i. 2. 71ᵇ21–23. Above, sec. 5.

(10) 1. Cf. Aristotle *Nicomachean Ethics* vi. 8. 1142ª12–19, *Posterior Analytics* i. 12. 77ᵇ27–33.
2. "Magnitude" is used here in the wider sense, including both discrete quantity (numbers) and continuous quantity (lines, surfaces, bodies). The "other" magnitudes (or quantities) thus means the continuous. In what follows Alfarabi uses "magnitude" to mean continuous quantity only, including (*a*) commensurable and (*b*) incommensurable magnitudes. Cf. Aristotle *Posterior Analytics* i. 7. 75ᵇ4, *Categories* ch. 6, *Metaphysics* v. 13. 1020ª11.
3. I.e., beyond arithmetic and geometry.
4. Arithmetic, geometry, and the five disciplines mentioned here make up the seven broad divisions of mathematics. For a more detailed account of each, see Alfarabi, *Enumeration of the Sciences,* ch. 3.

(11) 1. Aristotle *Metaphysics* vi. 1. 1026ª8–9, xi. 3. 1061ª28 ff., *De Anima* iii. 8. 431ᵇ15, *Physics* ii. 2. 193ᵇ25 ff.

(12) 1. Alfarabi, *Statesman,* sec. 89, reproduces certain phrases and sentences scattered here in secs. 12–20.
2. Aristotle *Metaphysics* iii. 1. 995ᵇ15–18, iii. 2. 997ª34–998ª19.

(13) 1. Cf. Aristotle *Metaphysics* i. 3. 983ᵇ6 ff.
2. "Particular" or "individual" (*juzʾī, merikos*) is normally used in contrast to "whole" or "universal" (*kullī, holikos*). Alfarabi uses it to characterize the beings whose existence and knowledge involve a material constituent (in contrast to mathematical forms and incorporeal principles, cf. above, sec. 12, below, secs. 16, 19). They comprise natural things and the things of the will. He speaks of their "intelligibles" ("intelligible idea" [*maʿnā maʿqūl*]), which are "one in the species or the genus," and the "particular" or "individual" instances of them, which have, or can be brought into, actual existence outside the mind. See, below, secs. 22–26, 34, 38, III, secs. 52–53, 91, 99.

(14) 1. See below, III, secs. 17 ff.

(15) 1. Above, sec. 5 n. 1.
2. Cf. above, secs. 8–9.

(16) 1. See below, III, secs. 31 ff.

(17) 1. See the transition below, III, secs. 68–69.
2. Cf. below, III, secs. 69 ff.

(18) 1. Alfarabi's *Statesman,* sec. 89 (166:7), and, below, III, sec. 99, may support emending this phrase to read: "different from the physical [or natural]." In any event, at the end of the preceding section and in what follows the "genus of things" in question is stated: the "rational principles" with which man labors toward his perfection. "Different from the metaphysical" could mean: understood as principles of "political science" (below, sec. 20) rather than of "divine science" (below, sec. 19), or of the "practical" rather than the "theoretical" intellect (below, III, sec. 99).
2. See below, III, secs. 91 ff.
3. Cf. Alfarabi, *Virtuous City* (*al-Madīnah al-fāḍilah*), ed. Fr. Dieterici (Leiden, 1895), p. 53, *Political Regime* (*al-Siyāsah al-madaniyyah*) (Hyderabad, 1346 A.H.), pp. 38–39.
4. Below, sec. 20.

(19) 1. Sections 4 ff.
2. Alfarabi, following Aristotle, calls the inquiry into metaphysical things "divine inquiry" or theology. Contrary to our expectations, however, Alfarabi does not derive "divine" from God (*Allāh*) as in his more popular *Enumeration of the Sciences* (ch. 4 [100]), but from "the god" (*al-ilāh*). Cf., also, his *Purpose of Aristotle's "Metaphysics"* (*Gharaḍ Arisṭūṭālīs fī kitāb mā baʿd al-ṭabīʿah*) in *Alfārābī's philosophische Abhandlungen,* ed. Fr. Dieterici (Leiden, 1890), pp. 34–38.

(20) 1. Alfarabi, *Virtuous City,* p. 46.
2. I.e., the "theoretical" part of it. Cf. below, sec. 26; Alfarabi, *Enumeration of the Sciences,* ch. 5 (103–4).

3. Alfarabi says "first principle" and "principles" respectively; cf. the physical-metaphysical and political connotations of *archē* (*archōn*): *principium-princeps*, "principle"-"prince."
4. Cf. Plato *Statesman* 274B ff.; below, III, sec. 3 (68:7–18). Alfarabi, *Virtuous Religion* (*al-Millah al-fāḍilah*), MS, Leiden, No. 1002, fols. 59*v*–60*v*, *Political Regime*, p. 54. As to the character and ground of the correspondence between the city and the world, see below, sec. 55.

(21) 1. Cf. above, secs. 17–20, below, secs. 22–26. According to this account, the theoretical sciences include a "theoretical" human or political science whose objects are the "intelligibles" or "ideas" of voluntary things as distinct from their *actual* existence at particular times and places. Contrast Aristotle *Nicomachean Ethics* i. 5–6, vi. 3, 5 (cf., however, x. 9. 1180^{b}14 ff.).

(22) 1. In this and the following sections Alfarabi elaborates his "solution" of the difficulties raised by Aristotle (*Nicomachean Ethics* i. 6) against the Platonic "ideas."

(23) 1. Aristotle *Metaphysics* v. 6. 1016^{b}31 ff.
2. The distinction between "natural" and "voluntary" intelligibles and the meaning of "voluntary" intelligibles are stated below, secs. 24 ff.

(24) 1. Aristotle *Nicomachean Ethics* iii. 3, vi. 4. 1140^{a}14–15.
2. Aristotle *Nicomachean Ethics* iii. 1. 1110^{b}16 ff., iii. 3.
3. Hence, the distinction between "man himself" and a particular man, and so on, is meaningful. Contrast Aristotle *Nicomachean Ethics* i. 6. 1096^{a}34 ff.

(26) 1. Aristotle *Posterior Analytics* i. 6, 9.
2. Aristotle *Nicomachean Ethics* iii. 3, 5, vi. 1. 1138^{b}35 ff., vi. 9. The "rationative," "thinking," "calculative," or "reflective" faculty (*fikriyyah*). Alfarabi defines it also (*Statesman*, sec. 6) as "that by which we deliberate on the thing which we wish to do, when we wish to know whether to do it is possible or not, and if it is possible, how we must do the action." (Dunlop) Cf. Alfarabi, *Intellect*, secs. 2–6.

(27) 1. Aristotle *Nicomachean Ethics* vi. 5. 1140^{b}16–17, vi. 9. 1142^{b}18 ff.
2. Aristotle *Nicomachean Ethics* iii. 4–5.
3. Alfarabi, *Statesman*, sec. 90 (168:5–6), *Intellect*, secs. 3–4, reproduce part of this sentence; cf. Alfarabi, *Statesman*, sec. 88 (164:5–7).

(28) 1. Cf. above, sec. 25. Parts of this sentence and others in this section are reproduced in Alfarabi, *Statesman*, sec. 90 (168:1–5).
2. Contrast Aristotle's description of the relation between "legislative wisdom" and what is "known by the general name 'political wisdom' " in *Nicomachean Ethics* vi. 8. 1141^{b}23–26 (cf., however, x. 9. 1181^{a}25–^{b}1).
3. Aristotle *Nicomachean Ethics* vi. 8. 1141^{b}27–28.
4. Aristotle *Nicomachean Ethics* vi. 8. 1141^{b}29 ff.; Alfarabi, *Statesman*, secs. 38, 41.

(29) 1. Aristotle *Nicomachean Ethics* vi. 5. 1140^{b}16 ff., vi. 9. 1142^{b}18–23, vi. 12. 1144^{a}6–36.

(31) 1. Cf. Aristotle *Nicomachean Ethics* i. 13, v. 1. 1129^{b}25 ff., *Magna Moralia* i. 33.

(33) 1. "Generally accepted" opinions (*mashhūrāt*) are to be distinguished from "generally received" opinions (*maqbūlāt*). The latter are based on the testimony of "one person or a group acceptable to a particular person or group only." Alfarabi, *Logic*, fol. 61*v*. Here, Alfarabi seems to substitute "religion" (*millah*) for generally received opinions. Cf. below, secs. 55 ff. In sec. 57 Alfarabi uses *mutaqabbal* ("well-received") in relation to the *imam*.
2. *Millah* is a Koranic term, where it usually means religion. It also designates the religious community or the congregation. But it is clear from this section and secs. 55 ff. below that Alfarabi is using *millah* here to designate the opinions and acts of such a community. When he intends to designate the religious *community*, he speaks of the "followers of a particular religion" (*ahl millatin mā*). Cf. Alfarabi, *Virtuous Religion*, fol. 51*v*: "The *millah* consists of opinions and acts . . . prescribed for a congregation by their supreme ruler."
3. "Everyone else" may mean (1) those who perform more particular functions, (2) those who wish to discover what is most noble according to the followers of other religions, (3) those who wish to discover what is most noble according to generally accepted opinion, or (4) those who wish to discover what is truly most noble. For the relation between the deliberative and moral virtues in general, cf. above, secs. 29 ff., below, secs. 35 ff.

(34) 1. Contrast Aristotle's discussion of the relation between these two faculties in *Nicomachean Ethics* vi. 5, 7.

(35) 1. Aristotle *Nicomachean Ethics* vi. 12.
2. I.e., "voluntary" as opposed to "natural"; cf. above, secs. 22 ff., below, III, sec. 3 (66:17).
3. Cf. Aristotle *Nicomachean Ethics* vi. 12. 1144^{a}6 ff., vi. 13; Alfarabi, *Harmonization of the Opinions of Plato and Aristotle* (*al-Jamʿ bayn raʾyay al-ḥakīmayn Aflāṭūn al-ilāhī wa-Arisṭūṭālīs*) in *Alfārābī's philosophische Abhandlungen*, ed. Fr. Dieterici (Leiden, 1890), pp. 16:20–19:2.

(36) 1. Alfarabi, *Statesman*, sec. 9.
2. Above, sec. 35.

(37) 1. Below, sec. 60.
2. Cf. Alfarabi, *Political Regime*, pp. 44 ff., 49.

(38) 1. Cf. above, sec. 13 n. 2.

(39) 1. Aristotle *Nicomachean Ethics* ii. 1, x. 9. 1179b20 ff.
2. Alfarabi, *Political Regime*, pp. 43–44.

(40) 1. See below, sec. 57 (43:9–17).
2. Sections 4 ff.
3. *Ibid.*
4. *Republic* ii. 376E–iv. 427C, vii. 521C–541B. Alfarabi, *Logic*, fol. 91*r*:4–5.
5. This term (*bādiꝛ al-raꝛy al-mushtarak*) is an equivalent of "generally accepted opinion" (cf. above, sec. 33 n. 1) with the additional emphasis on its "unexamined" character. "The generally accepted opinions held by everyone *fī bādiꝛ al-raꝛy* . . . and *bādiꝛ al-raꝛy* is that which has not been scrutinized." Alfarabi, *Logic*, fol. 89*v* (cf. *Intellect*, secs. 7, 12). For the contrast between "unexamined" opinion and what is "subjected to thorough scrutiny," see below, secs. 50–51. This contrast indicates that the "examination" or "scrutiny" in question is not restricted to ascertaining whether the opinions are in fact generally held or only "appear" to be generally held "at first sight" (*fī ẓāhir al-ẓann*). Alfarabi, *Logic*, fol. 88*v;* Aristotle *De Sophisticis Elenchis* ch. 1.
6. Cf. below, sec. 55 n. 1.

(41) 1. I.e., deliberative and moral.
2. Aristotle *Nicomachean Ethics* x. 9. 1180a4 ff.

(42) 1. Aristotle *Nicomachean Ethics* x. 9. 1180a19 ff.; Plato *Statesman* 259C, *passim;* Alfarabi, *Plato's "Laws"* (*Nawāmīs Aflāṭūn*), ed. Fr. Gabrieli (London, 1952), II (12:1–2), III (20:1).
2. Note, however, the end of the section and the following section where the dual aspect of this skill is emphasized.

(43) 1. Aristotle *Nicomachean Ethics* i. 9. 1099b32–10. 1100a20, x. 6. 1176a32, x. 8. 1178b24–27; Alfarabi, *Virtuous City*, p. 46. Cf. below, sec. 52.
2. Alfarabi, *Political Regime*, p. 59:19 ff., *Virtuous City*, pp. 65–66.
3. Alfarabi, *Plato's "Laws,"* IV (22:16 ff.), *Virtuous City*, pp. 60–61.

(44) 1. Sections 41–43, perhaps also secs. 28 ff.
2. Aristotle *Rhetoric* i. 2, *passim.*
3. Alfarabi, *Virtuous Religion*, fols. 53*v*–54*v*.

(45) 1. Alfarabi, *Political Regime*, pp. 40 ff.

2. Alfarabi, *Plato's "Laws,"* I (5:4–5), II (13:14–15:10, 16:12–19), *Political Regime*, pp. 46 ff.
3. The latter two sciences are (derivatively) "theoretical" (or "philosophic," cf. sec. 55 [40:12–13]) insofar as (*a*) they deal with opinions (vs. acts) and (*b*) their subjects were originally seized upon in the theoretical sciences properly so called (above, sec. 44, below, sec. 46). On the preservation of the law, cf. Alfarabi, *Plato's "Laws,"* VII.

(47) 1. Alfarabi, *Virtuous Religion*, fol. 54.

(48) 1. Alfarabi, *Political Regime*, pp. 48–49, 53–54.

(50) 1. Above, sec. 46.
2. Above, sec. 40 n. 5; Alfarabi, *Political Regime*, pp. 55–56.

(51) 1. Or "follower," "successor" (*tābiꜥ*). He functions as an "aide" or "subordinate" who is employed by the supreme ruler to apply and preserve his law (above, secs. 44, 47–48). In the absence of the supreme ruler, the "adherent" is envisaged as his "successor." This is a second-best arrangement; the ruler will then lack theoretical knowledge and hence the ability to be a true lawgiver (above, secs. 45 ff.). This rule "adheres to the supreme rule" (*riꝛāsah tābiꜥah li-l-ūlā*) or takes it as a model. "He who assumes *this* office is called the *commander of the law* and the *prince of the law.*" Alfarabi, *Virtuous Religion*, fol. 56*r–v*, cf. fol. 58*r*:20 ff., *Virtuous City*, pp. 60–61, 69–70, *Political Regime*, pp. 51, 54.

(52) 1. Above, sec. 46.
2. Cf. Aristotle *Nicomachean Ethics* x. 7–8; above, secs. 1, 43, 45–46, 49. Consider, especially, the relation between sec. 43 and secs. 52 ff.

(53) 1. For an account of the "philosophic" sciences (mathematics, astronomy, and so on) of the "Chaldeans," cf., e.g., Ṣāꜥid al-Andalusī, *Classes of Nations* (*Ṭabaqāt al-umam*), ed. Louis Cheikho (Beirut, 1912), iv. 3.
2. Southern Mesopotamia, the alluvial region bounded in the north by a line from al-Anbār to Takrīt. Cf. *ibid.* i.
3. *Ibid.* iv. 6. Ṣāꜥid al-Andalusī reports the popular myth of the "prophetic" origin of the philosophic sciences. In addition to claiming that philosophy *alone* is true wisdom, Alfarabi insists (below, sec. 55 [41:12]) that "philosophy is prior to religion *in time.*"
4. *al-Siryān:* the Jacobite and Nestorian (Monophysite) Christians using Syriac as a literary medium in Syria, Mesopotamia, and the Persian Empire.
5. Aristotle *Nicomachean Ethics* vi. 7. 1140b9–12. Below, III, secs. 7–9.
6. BM, EH. "Human" H; "political" F. Cf. Aristotle *Nico-*

machean Ethics vi. 7. 1140a12–15 (wisdom "in general"), 1141b7 ff. ("practical," "human" wisdom).

7. Cf. Aristotle *Nicomachean Ethics* vi. 7. 1141b16 ff.; Alfarabi, *Statesman*, sec. 34.

(54) 1. Contrast Aristotle *Nicomachean Ethics* vi. 7. 1140b20 ff. (and the reference to Anaxagoras and Thales in 1141b3 ff.), x. 8, x. 9. 1180a32 ff., 1180b14 ff. (cf., however, *Magna Moralia* i. 2. 1184a32 ff.). Alfarabi, *Harmonization of the Opinions of Plato and Aristotle*, pp. 4:21–5:21.

2. Above, sec. 41 n. 1.

(55) 1. "Make comprehensible" (*tafhīm*) is apparently used as a synonym of "seizing upon the concept" (*taṣawwur*), the term employed usually in conjunction with "assent [to a proposition]" or "judgment" (*taṣdīq*). The sequel indicates, however, that "comprehension" and "assent" are employed by Alfarabi here with connotations wider than those of formal logic.

2. Cf. above, sec. 33; Alfarabi, *Plato's "Laws,"* II (13:14–19, 15:7 ff.), *Political Regime*, pp. 55–57, *Virtuous City*, pp. 51–53.

3. Cf. above, secs. 45 ff.

4. Cf. Alfarabi, *Virtuous Religion*, fol. 53*r*.

5. The causes or principles of the heavenly bodies. Alfarabi, *Political Regime*, pp. 2 ff., *Virtuous City*, pp. 19–20, 69.

6. Alfarabi says "principles" and "principles." Cf. above, sec. 20.

7. 19D, 21B–C, 29B ff. Cf. below, II, secs. 33, 35.

8. Alfarabi elaborates this theme in the *Virtuous Religion*, fols. 58 ff., *Political Regime*, pp. 55:8–57:10. He presents two elaborate schemes based on it in his *Virtuous City* and *Political Regime*.

(56) 1. Cf. above, sec. 54.

2. Above, secs. 23 ff.

3. Alfarabi, *Virtuous Religion*, fols. 51*v*–52*v*.

4. Cf. Aristotle *Nicomachean Ethics* x. 9. 1180a32–b23; Alfarabi, *Plato's "Laws,"* II (15:11 ff.).

5. Above, secs. 23 ff.

6. Apparently meaning "moral virtue"; see above, secs. 35 ff., cf. sec. 41 n. 1.

(57) 1. Contrast Aristotle *Nicomachean Ethics* vi. 7. 1141a20 ff.

2. Aristotle *Nicomachean Ethics* x. 7. 1177a33–b1. Alfarabi, *Virtuous City*, p. 57.

3. "Practical" as distinguished from "incorporeal" and "natural." They are the intelligibles whose realization depends on deliberation, moral character, and art. Above, secs. 22 ff., 40.

4. Alfarabi, *Plato's "Laws,"* II.

5. Consider Aristotle's objections in *Nicomachean Ethics* i. 6. 1096b35 ff.

6. Below, secs. 60 ff.

(58) 1. Below, II, sec. 8.

(59) 1. "Things" (*ashyāʾ*). The term *shayʾ* is used throughout in a variety of senses (roughly corresponding to "being"). It can signify particulars or universals (cf. above, sec. 1), what exists outside the mind or the intelligible ideas (as here), the objects of knowledge or of opinion and imagination (as in the rest of the section). Cf. below, III, secs. 4 n. 6, 19.

2. Cf. above, sec. 57 n. 3.

3. Cf. above, secs. 53 ff.; Alfarabi, *Virtuous Religion*, fol. 53*r*, *Virtuous City*, pp. 69–70 (note the possibility of *different* good or virtuous "religions," cf. *Political Regime*, p. 56).

(60) 1. ii. 375A ff., vi. 487B ff., *passim*. Cf. Alfarabi, *Virtuous City*, pp. 59–60.

2. Alfarabi, *Statesman*, sec. 93; above, sec. 33 n. 1.

(61) 1. *Republic* vi. 498B; cf. Aristotle *Meteorologica* ii. 2. 355a9 ff.

(62) 1. Sections 53, 57, 59.

2. Plato *Republic* vi. 498A.

3. Alfarabi, *Statesman*, sec. 29; Plato *Statesman* 259A–B.

(64) 1. Above, sec. 61 (46:6).

Part II: THE PHILOSOPHY OF PLATO

(2) 1. For details on the possible origins of the "explanations" of the dialogues' titles (many of which are marginal or interlinear additions to the text of the unique manuscript), cf. F. Rosenthal and R. Walzer, *De Platonis Philosophia* (London, 1943), pp. xvi–xviii, 17 ff.

(3) 1. Read *kamāl lah* (A?) for *ghāyatih* in line 4.

(5) 1. Bracket *maʿnāh* in line 14 with A. The marginal note in A sets a small *ʿayn* above the first word which may suggest that it is to be read *ʿāmil* ("maker") rather than *ḥāmil* ("carrier").

2. Read *wa-yūjad* for *wa-yuʾkhadh* in line 7 with A.

3. Cf., also, Aristotle *Metaphysics* iv. 5–6.

(6) 1. Read <*wa-immā an yajhalah*> *wa-inn mā* for *wa-immā ann mā* in line 16. Cf. Alfarabi, *Logic*, fol. 79*r*:3.

(7) 1. The term used for "religion" in this section is *dīn* (cf. *millah*, above, I, secs. 33, 55 ff.). In the *Virtuous Religion* (fol. 52*v*:16–18), Alfarabi says *"millah* and *dīn* are almost synonyms." In Islam, "religious speculation" would refer to dialectical theology (*kalām*) and the "religious syllogistic art" to jurisprudence (*fiqh*). Cf. Alfarabi, *Enumeration of the*

Sciences, ch. 5. The "syllogistic art" (*al-ṣināʿah al-qiyāsiyyah*) was, of course, employed by theologians as well.

(8) 1. Cf. Alfarabi, *Directive to the Path of Happiness* (*al-Tanbīh ʿalā sabīl al-saʿādah*) (Hyderabad, 1346 A.H.), pp. 25–26, *Logic*, fol. 4.
2. Read *bi-jawāhir* in line 4 with A.
3. Add *miqdār mā* after *kam* in line 7 with A.

(10) 1. Bracket <*min*> *dhālik* in line 5.

(11) 1. Add *mithl* after *faḥṣ* in line 7 with F.
2. Read *wa-annah* for <*fa-tabayyan lah*> *annah* in line 14 with A.

(12) 1. Read *fuḥūṣ* for *ṣināʿah* in line 3 with A.

(13) 1. Read *wa-inn* for *wa-lākin innamā* in line 2.
2. Bracket *qaṣd al-muqtanīn lahā* in line 3.
3. Throughout secs. 13–16, 20, the Arabic term is *fāḍil* ("virtuous").

(17) 1. Not *insān* (*anthrōpos*, "human being"), which is the usual term employed by Alfarabi, but "*male* human being" (*rajul*, *anēr*). The Arabic for "fortitude" in this section is *rajlah* ("manliness," the "male character").
2. Cf. Rosenthal and Walzer, *op. cit.*, pp. xix, 9, 21.
3. *Ibid.*

(18) 1. *Ibid.*

(20) 1. *Ibid.*, p. 21.

(21) 1. *Statesman?* Cf. Rosenthal and Walzer, *op. cit.*, pp. 21–22.

(22) 1. Cf. above, I, sec. 42 n. 2.
2. Or "supplies, from the outset, the desired science and, from the outset, the desired way of life." There is a persistent ambiguity throughout this section as to whether there is one or two skills and faculties.
3. Read *wa-ann kull wāḥidah minhumā* in line 10 with A (adopting *minhumā* for *baynahumā* in note).

(24) 1. *Lysis?* Cf. Rosenthal and Walzer, *op. cit.*, p. 22.

(25) 1. Read *yaltamisuhā* for *taltamisuhā*[2] in line 15 with A.

(26) 1. Plato *Phaedrus* 265D, 266B; cf. Alfarabi, *Harmonization of the Opinions of Plato and Aristotle*, pp. 2:12 ff., 8:20 ff.

(28) 1. Alfarabi, *Harmonization of the Opinions of Plato and Aristotle*, pp. 5:22–6:5.

(29) 1. Bracket *aw ʿalā . . . madīnah* in lines 17–18.
2. Read *allatī* <*hiy ʿalā al-ḥaqīqah fāḍilah*> in line 2.
3. Cf. Rosenthal and Walzer, *op. cit.*, pp. 23–24.

(30) 1. *Ibid.*, pp. 24–25; cf. the beginning of sec. 30.
2. Cf. Alfarabi, *Harmonization of the Opinions of Plato and Aristotle*, pp. 20–22, where he refers to the problem of the immortality of the soul.

3. Cf. Ibn ʿAqnīn's paraphrase of 18:3–19:13. A. S. Halkin, "Ibn ʿAḳnīn's Commentary on the Song of Songs," *Alexander Marx Jubilee Volume* (English Section; New York, 1950) p. 423 n. 152.
4. Cf. Aristotle *Historia Animalium* ii. 13. 505^{a}28 ff.
5. Read *khilqatuhā* for *khilqatuh* in line 9 with Ibn ʿAqnīn.
6. Add *fīh* after *yakūn* in line 9 with Ibn ʿAqnīn.
7. Read *annah* for *ann* in line 10 with Ibn ʿAqnīn.
8. Read *wa-* for *aw* in line 4 with F and Ibn ʿAqnīn.
9. Read *wa-yabʿud* for *wa-baʿīdā* in line 10 with Ibn ʿAqnīn.
10. Read *falidhālik* for *fabidhālik* in line 12 with Ibn ʿAqnīn.
11. Bracket *kayf yakūn* in line 15.

(32) 1. Read *al-muʿādi*<*ya*>*h* for *al-muḍāddah* in line 11 with A.
2. Cf. Alfarabi, *Harmonization of the Opinions of Plato and Aristotle*, p. 32:3–5, where he refers to the "story" of resurrection and judgment (*Republic* x). Above, I, secs. 40, 60.

(33) 1. Cf. Alfarabi, *Harmonization of the Opinions of Plato and Aristotle*, pp. 24–27, 30, where he classifies the *Timaeus* and the *Politeia* (*Republic*) among Plato's books "on divine things" (*fī al-rubūbiyyah*) and compares the statements contained in them with the "amazing" statements of the lawgivers and the learned men of various sects and religions. Above, I, secs. 40, 60.
2. Cf. above, I, sec. 55.

(34) 1. Read *al-siyar* for *al-sīrah* in line 1 with A.

(36) 1. Cf. Aristotle *Metaphysics* i. 6. 987^{b}1–4, xiii. 4. 1078^{b}17–21, xiii. 10. 1086^{b}3–5.
2. Cf. Aristotle *Nicomachean Ethics* vi. 13, *Magna Moralia* i. 1. 1183^{b}8–18, i. 9. 1187^{a}5 ff., i. 34. 1198^{a}10–21.
3. *Cleitophon?* Cf. Rosenthal and Walzer, *op. cit.*, pp. 27–28. Cf., also, Plato *Republic*, *Phaedrus* (above, sec. 27), and the distinction between the Socratic and the Platonic views of virtue in Aristotle *Magna Moralia* i. 1. 1182^{a}15–29.

Part III: THE PHILOSOPHY OF ARISTOTLE

(1) 1. The expression *wa-akthar* ("and more") occurs also in Alfarabi's *Political Regime*, p. 70:10. Like *polus*, *pleistos*, *pleiōn*, and so on, it can mean "more," "for the most part," "very much," "much too much," but also "go beyond bounds," "have (or claim) too much," "do too many things" (cf. the way Alfarabi explains the difference between Aristotle and

Plato [*Harmonization of the Opinions of Plato and Aristotle,* p. 5:10–21] as the result of the "excess" of Aristotle's "natural power"), which again may be intended as praise or blame. This ambiguity characterizes Alfarabi's account of Aristotle's philosophy as a whole.

2. Although Alfarabi does not mention any of Aristotle's "early" works, the themes of many of these works are present in the following account of the "position from which Aristotle started." Following the classical tradition, Alfarabi calls these works Aristotle's "public" or "civic" works on "external philosophy." (Alfarabi, *Introduction to Aristotle* [*Fīmā yanbaghī an yuqaddam qabl taʿallum al-falsafah*] in *Alfārābī's philosophische Abhandlungen,* ed. Fr. Dieterici [Leiden, 1890], p. 50:16 ff., *Logic,* fol. 91*v;* above, I, sec. 55.) Accordingly, Aristotle's "beginning" should perhaps be understood to mean his "public," "civic," or "dialectical" arguments on the "perfection of man." This would explain why Alfarabi draws upon the "early" works as well as upon the "dialectical" parts of "later" works, e.g., *Nicomachean Ethics, De Anima,* and *Metaphysics.* The guiding principle is thus not the date of composition. What is being explained is not a "development," and certainly not a "gradual development" away from Plato, but the kind of argument used. Cf. above, II, secs. 27, 36, below, secs. 15–16.
3. Cf. above, II, sec. 1.
4. I.e., over and above the "merely necessary" soundness of each. Below, sec. 2 (60:20–21, 64:18–65:9).

(2) 1. Above, II, sec. 18.
2. Above, II, sec. 37.
3. Below, secs. 3 (63, 69:8 ff.), 4, 91 ff.
4. Read *fīmā yudrik bi-al-ḥiss lā fīmā* in lines 9–10. Cf. Aristotle *Metaphysics* i. 1. 980ᵃ21–ᵇ25.
5. Above, II, sec. 9.

(3) 1. Or "problems" (*maṭlūbāt*). Even when discussing Aristotle's logical works (below, secs. 5 ff.) Alfarabi uses this term alone where the Arabic translations of these works distinguish between *maṭlūbāt* ("problems") and *masāʾil* ("questions"). Cf. Alfarabi, *Logic,* fol. 30*v*:12–14.
2. Above, I, sec. 2.
3. Above, I, secs. 20, 34, II, secs. 13–16.
4. Or "accidents" (*aʿrāḍ*).
5. Above, I, sec. 6.
6. *Ibid.*
7. Above, I, secs. 23 ff.
8. Above, I, sec. 20.

(4) 1. Cf., however, below, sec. 13 (81:8 ff.) and n. 2.
2. Above, sec. 3 (69:17).
3. Above, I, secs. 23–24.
4. Above, secs. 3 (70:15 ff.)–4 (71:5 ff.).
5. Aristotle *Metaphysics* iii. 6.
6. "Things" (*ashyāʾ*). Cf. above, I, sec. 59 n. 1.

(6) 1. "Matters" (*umūr*).
2. Throughout this section: "things" (*ashyāʾ*) or "matters" (*umūr*). Cf. the use of "rules" (*qawānīn*), below, secs. 13, 14.

(7) 1. Above, I, secs. 5–6.
2. Above, I, secs. 5, 8.
3. Above, I, secs. 6–7, 11–20.
4. "Angel" (*malak* F) or "king" (*malik*).
5. The formula of the text corresponds to $A:B::C:D$.
6. Cf. above, I, sec. 53.

(9) 1. Above, I, sec. 53.

(12) 1. Above, I, secs. 40 ff., 46, 50 ff., 55.

(13) 1. Aristotle *Topics* viii. 5, *De Sophisticis Elenchis* chs. 11, 34.
2. Cf. Aristotle *De Sophisticis Elenchis* ch. 3; above, sec. 4 (71:14). In his paraphase of *De Sophisticis Elenchis* (*Logic,* fol. 52*v*) Alfarabi divides fallacies into those that take the form of "reasoning" or "syllogism" (*qiyās*) and those that do not. The latter are "the human states, the aptitudes, and the states of character that turn man away from truth to error: for instance, love or hatred for an opinion. . . . These are more appropriately dealt with in the *Rhetoric* and the *Poetics.*" This is the class to which "silencing" belongs. Cf. Aristotle *De Sophisticis Elenchis* chs. 5. 167ᵇ8 ff., 15. 174ᵇ19 ff.
3. Aristotle *De Sophisticis Elenchis* ch. 12. 172ᵇ10–28 ("fallacy").
4. As in a number of other terms in this section, Alfarabi does not use the Arabic terms used in the Arabic translations of Aristotle's *De Sophisticis Elenchis.* The term rendered "flattery" is *dahn,* which means also "to weaken" ("weakness of opinion" is found among the Arabic renderings of "paradox"). Both "flattery" and "weakening" are implied in Aristotle's description of the way to entrap someone into a paradox, *De Sophisticis Elenchis* ch. 12. 172ᵇ36 ff.

(15) 1. Add F; cf. above, sec. 12.
2. Aristotle *Rhetoric.* Cf. Alfarabi, *Logic,* fols. 112*r* ff.; above, I, secs. 44 ff., II, sec. 36.

(16) 1. Aristotle *Poetics.* Cf. Alfarabi, *Logic,* fols. 122*r*–23*r;* above, I, sec. 55, II, sec. 9.
2. Above, sec. 4.

(18) 1. Aristotle *Physics* ii. 1. 193ᵃ30–31, *Metaphysics* v. 8. 1017ᵇ25. "Whatness" or "quiddity" (*māhiyyah*) is derived from the particle *mā* and the pronoun *huw* ("what it [*or* this] is") and indicates the differentiae of the specific substance, its shape or form (*eidos* or *morphē*). It is frequently used synonymously with "form" (*ṣūrah*) (cf. above, I, sec. 6, below, secs. 22 [93:2], 25 [94:12–14]) and "essence" (*dhāt*) (cf. below, sec. 54 n. 2).

(22) 1. Cf. Aristotle *Physics* ii. 3. 194ᵇ26, 195ᵃ20.

(39) 1. E.g., Empedocles, Anaxagoras, and Leucippus; cf. Aristotle *De Generatione et Corruptione* i. 1–2.

(44) 1. I.e., *Fire, Air, Water,* and *Earth.* Aristotle *De Generatione et Corruptione* ii. 3. 330ᵇ2–4; below, sec. 59.
2. Above, secs. 36 ff.; Aristotle *De Caelo* iii. 7. 305ᵇ20 ff.
3. I.e., the elementary qualities (hot, cold, dry, moist) diversely coupled so as to constitute the "simple" bodies. Aristotle *De Generatione et Corruptione* ii. 1–3; below, sec. 54 (104:1–2).

(54) 1. Although the previous section refers to the final chapter of *De Generatione et Corruptione,* secs. 54–63 (which do not discuss the particular phenomena treated in *Meteorologica* i–iii) continue to speak of subjects treated in this work.
2. "Whatness" (*māhiyyah*) throughout the remaining sections. The term *dhāt,* which is normally rendered "essence," does not occur in the remaining sections except in secs. 82 (118:17), 90 (123:10), 92 (124:17, 125:2).
3. Cf. Aristotle *De Caelo* iv, *De Generatione et Corruptione* ii. 4–5, *Meteorologica* i. 3.

(59) 1. Read *al-nār* for *al-lahīb* in line 15. Cf. below, sec. 60 (107:5); Aristotle *De Generatione et Corruptione* ii. 4. 331ᵇ24.

(63) 1. Above, sec. 54 n. 1.

(66) 1. Read *hawāʾ wa-māʾ* for *qiwā* in line 7. Aristotle *De Anima* ii. 8. 419ᵇ18 ff., ii. 9. 421ᵇ9 ff.

(68) 1. This work formed an appendix to Aristotle's *Meteorologica.*

(71) 1. Sections 69–71. (pseudo-)Aristotle *De Plantis.*

(74) 1. Sections 72–74. Aristotle "De Naturis Animalium" (*De Partibus Animalium, De Generatione Animalium,* and *Historia Animalium*).

(78) 1. Section 75–78. Aristotle *De Anima* i. Cf. below, sec. 95.

(81) 1. Aristotle *De Longitudine et Brevitate Vitae.*

(82) 1. Aristotle *De Vita et Morte.*

(85) 1. Aristotle *De Incessu Animalium.*

(86) 1. Aristotle *De Respiratione.*

(87) 1. Aristotle *De Somno et Vigilia.*
2. Aristotle *De Somniis.*
3. Aristotle *De Divinatione per Somnum.*

4. Below, sec. 95.

(88) 1. Aristotle *De Memoria et Reminiscentia.*
2. Aristotle *De Anima* ii.

(89) 1. The transition appears to refer to Aristotle *De Anima* ii–iii.

(90) 1. Cf. Alfarabi, *Intellect,* secs. 13 ff.

(91) 1. Above, I, sec. 18.
2. Above, secs. 2 (60:17–61:2), 3 (63, 69:8 ff.), 4; cf. I, secs. 21 ff.
3. Above, I, secs. 23 ff.

(95) 1. Above, secs. 78, 87, 90.

(96) 1. Above, secs. 63, 74, 76, 78, 90.

(97) 1. Read *ʿamaliyyah* for *ʿaqliyyah* in line 11.

(98) 1. Above, sec. 97.

(99) 1. Above, secs. 31–35, 38, 49.
2. Above, sec. 97.
3. Above, I, sec. 13 n. 2.
4. This apparently refers to the faculties stated above, secs. 87–89.
5. Above, sec. 91.
6. Above, I, secs. 16 ff.
7. Above, I, secs. 18 ff.
8. Cf. Alfarabi, *Aristotle's "Metaphysics,"* pp. 34–38.

Notes to the Arabic Text of *The Attainment of Happiness*

The numbers on the margin of the translated text refer to the pages and lines of the first and so far the only editions of the three parts of the Arabic text, which have appeared separately as follows:

I. *The Attainment of Happiness* (*Taḥṣīl al-saʿādah*) (Hyderabad, 1345 A.H.).

II. *The Philosophy of Plato* (*Falsafat Aflāṭun*), ed. Franz Rosenthal and Richard Walzer (London, 1943).

III. *The Philosophy of Aristotle* (*Falsafat Arisṭūṭālīs*), ed. Muhsin Mahdi (Beirut, 1961).

The edited text of Parts II and III is based on a unique Arabic manuscript (A) preserved in the Aya Sofya Library in Constantinople (No. 4833, fols. 1*v*–9*v* and 19*v*–59*r*, respectively) and Falaquera's Hebrew paraphrase (F) contained in *Reschith Chokmah*, ed. M. David (Berlin, 1902), pp. 72–78 and 78–92, respectively. (There exists a manuscript copy of a Latin translation of Falaquera's work in the Bibliothèque Nationale, Paris, Départment des Manuscrits, Latin, No. 6991*A*. It is, however, practically useless for establishing Falaquera's text apart from pointing out certain obvious mistakes in David's edition.) After the publication of the text of Part II, A. S. Halkin published the text of Ibn ʿAqnīn's paraphrase of a part of II, sec. 30. The well-known disciple of Maimonides quotes this passage in his *Commentary on the Song of Songs*. (Above, II, sec. 30 n. 3.) The notes to Parts II and III indicate such cases where readings other than those of the edited text were adopted and supply their authority. Where the readings differ from what is reported in the text or *apparatus criticus* of Part II, they are based on a fresh examination of the Aya Sofya manuscript and Falaquera's Hebrew paraphrase.

This procedure did not prove practical in respect to Part I. The Hyderabad text (H) is not an edition but a printer's copy. It is ostensibly based on "two manuscripts" (p. 37 n. 1). These are not identified, however. Such indications as can be gathered from other treatises by Alfarabi printed in Hyderabad at about the same time (cf., e.g., *Sharḥ risālat Zaynūn al-kabīr al-Yūnānī* [Hyderabad, 1349 A.H.], p. 2, *Masāʾil mutafarriqah* [Hyderabad, 1344 A.H.], p. 24) point to the two "almost identical" manuscript collections preserved in the State Library of Rampur and numbered *Ḥikmat* 150 (said to be in "ancient script") and 151 (said to be younger and dated 1276 A.H.). The catalogue of that library (*Fihriste kutube ʿArabī* [Rampur, 1902], p. 400, cf. p. 403) confirms this information in part, and adds that the two collections are made up of 392 and 410 pages, and the *Attainment of Happiness* of 50 and 62 pages, respectively. It is not possible in the absence of a published catalogue to ascertain whether or not the

manuscript No. 149 preserved in the library of Nadwat al-ʿUlamāʾ in Lucknow was utilized in the Hyderabad text (as may be suggested by the symbol N which designates this manuscript in *Sharḥ risālat Zyanūn*), or whether this manuscript contains the *Attainment of Happiness.* In any event, the practical identity of the two manuscripts utilized is attested by the lack of variants (the one exception is the variant reported on p. 46 n. 1) in the Hyderabad text. None of these manuscripts is at present easily accessible.

In order to establish a more reliable basis for the present translation, the Hyderabad text has been collated with Falaquera's Hebrew paraphrase and with two manuscript copies of the Arabic original. The first (BM) is the manuscript preserved in the British Museum, London (Add. 7518 *Rich.*, fols. 88*v*–110*v*), copied in Isfahan in 1105 A.H. The second (EH) is the manuscript preserved in the Topkapu Saray Library, Constantinople (Emanet Hazinesi, No. 1730, fols. 52*r*–62*v*), dated 1089 A.H. Of the two manuscripts, EH is closer to the Hyderabad text, but all three (H, BM, and EH) form a close family. In general, the readings of the manuscripts were preferred to those of the printed text. Falaquera's Hebrew paraphrase (F), contained in *Reschith Chokmah,* pp. 61–72, is, of course, based on a copy older than all the extant Arabic manuscripts. That copy must have belonged to a different family representing a more complete text. The readings from Falaquera have been translated back to Arabic and are given here in quotation marks.

The following notes are drawn from the material being gathered with a view to an eventual edition of the Arabic text of the *Attainment of Happiness.* They are not conceived as an *apparatus criticus* to the Hyderabad text. They simply list the readings adopted for the purpose of the present translation and indicate their authority. The numbers refer to the pages and lines of the Hyderabad text. They are followed by the reading of the printed text and then by the reading adopted here and its authority. In all cases where the reference is unmistakable, the reading of the Hyderabad text is not reproduced and the note simply records the adopted reading:

H = Alfarabi, *Taḥṣīl al-saʿādah* (Hyderabad, 1345 A.H.)
BM = Alfarabi, *Taḥṣīl al-saʿādah,* MS, British Museum (London), Add. 7518 *Rich.*
EH = Alfarabi, *Taḥṣīl al-saʿādah,* MS, Topkapu Saray Library (Constantinople), Emanet Hazinesi, No. 1730.
F = Falaquera, *Reschith Chokmah,* ed. M. David (Berlin, 1902).
St. = Alfarabi, *Aphorisms of the Statesman,* ed. D. M. Dunlop (Cambridge, 1961).

2 4 *al-ākhirah* BM, EH, F || 6 *mutayaqqanā bihā* BM?, EH, F
3 8 *al-muthbitah:* + *lah* BM, F || 10 *yūqiʿunā: yūqiʿ lanā* BM, EH ||

11 *tūqiʿunā: tūqiʿ lanā* BM, EH || 13 *nastaʿmil: "nasluk"* F || *ilā:* + *"al-yaqīn wa-nasluk fī maṭlūb ākhar ṭarīqā naṣīr minh ilā mā huw mithāluh aw khayāluh aw ṭarīqā yufḍī binā ilā"* F || 19 *takhuṣṣ wāḥidah* BM
4 1 *bi-ṣināʿah* BM, EH || 6 *fa-tuḍallil* BM, EH || *wa-yataḥayyar: aw tuḥayyirah fīh* BM, EH || 15 *bimā: bihā mā* || 16 *fīh: fīhā* BM, EH, F || 19 *aw li-kathīr* BM, EH
5 2 *wa-:* + *"idhā kānat al-maʿlūmāt al-uwal fī jins min al-ajnās hiy bi-aʿyānihā asbāb mā yashtamil ʿalayh dhālik al-jins"* F || *idhā*[1]*: idh* EH, F || 19 *bi-wujūd* BM, F
6 1 (transfer this line to the top of p. 7) || 2 [*ʿalayh*] BM, F || 5 *ʿalā:* + *mā huw* BM || 10 *lā yatakhaṭṭ<ā>* BM || 11 *faʾidhā* BM, EH
7 5 [*min*] BM, EH || 9 *maʿlūmah* BM, EH || 10 *majhūlah* BM, EH || 11 *-hā: bihā* BM || 19 *fa-natakhaṭṭā* BM?, EH?
8 3 *wujūd mabdaʾih* BM, EH || 11 *wa-huw* BM, EH, F || 13 *bi-al-aʿdād: al-aʿdād*
9 1 *wa-lākin: dhālik* BM, EH || 2 *wa-kān: kān* BM, EH || 3 [*min*[2]] BM, EH || 4 *famā* BM, EH || 13 *al-taʿlīm* || 14 *alladhī:* + <*fīh*> || 15 *yanẓur:* + *fīh* BM, EH || 17 *fa-yakuff* EH || *idh* BM, EH
10 3 *al-ʿaql* BM, EH || 5 *ukhidhā* BM, EH || 6 *wa-lam: lam* BM, EH || 9 *allatī hiy: "thumm ilā"* F, St. (165:10 n.) || *wa-ilā al-athqāl* BM, EH, St. (165:11) || 10 *ayḍā: aṣlā* BM, EH, F || *thumm:* + *ilā* EH || 11 *wa-taṣawwurih:* + *wa-fī an yuʿqal* BM || 14 [*muḥtājā fī an yaṣīr*] || 18 *mutākhimā* BM, EH, St. (165:16 n.) || *al-jins* BM, EH, St. (165:16)
11 14 *wa-mādhā* BM, EH
12 2 *al-wujūd* BM, EH || 4 *mabādiʾ* BM || *al-mabādiʾ:* + *al-qarībah* BM || 6 *yaʾtī* BM || 7 *fa-ḥaṣalat* BM, EH || 9 *istaʿmalnā* BM, EH
13 2 *yaḍṭarruh* BM, EH || 3 *aw: wa-* EH, F || *wa-yartaqī* BM, EH || 5 [*al-naẓar*] F || 7 *mabādiʾ:* + *ukhar laysat bi-ajsām wa-lā fī ajsām wa-lā kānat wa-lā yakūn* (read *takūn*) *fī ajsām yakūn qad intahā bi-al-naẓar fī al-ḥayawān al-nāṭiq ilā shabīh mā intahā ilayh ʿind naẓarih fī al-ajsām al-samāʾiyyah fa-yaṣīr ilā an yaṭṭaliʿ ʿalā mabādiʾ* EH || 9 *ʿalayhā:* + *ʿind* BM, EH || 12 *al-taʿlīm:* + *"al-ʿālam"* F, St. (166:12) || 18 *bimā: innamā* BM, EH
14 3 *lah: "yaḥṣul bih"* F || 5 [*lā*] EH, F || 8 *yablughuh* BM, EH, F
15 1 *bimā: mimmā* BM, EH || 9 *"wujūduhā"* F, St. (166:19) || *ʿalayhā* St. (166:19), F || 12 *al-wujūd:* + *"wa-huw aqrabuhā ilayh ḥattā yantahī ilā ākhirihā rutbah fī al-wujūd"* F || *abʿaduhā* BM, EH, F || 14 *lah: al-ilāh* BM, EH, F || 15 *wa-lā fī* BM, EH, F || 19 *"tanfaʿ fī bulūghih"* F
16 3 [*wa-li-ajl mādhā*] || 11 *al-wujūd kadhālik* BM, EH || 11–12 *fī jumlah mā: fīmā* BM || 12 *ukhar* BM || 14 *yantahī:* + *ilā* BM, EH
17 2[1,2] *uʿṭiyat* BM, EH || 3 *uʿṭiyat* BM, EH || 5 *ʿaqal kayf* BM, EH ||

8 *istinād: ījād* BM, EH || 11 *tadūm* BM || 12 *tadūm:* + <*wāḥidah bi-al-ʿadad bal tadūm*> || 14 *taqtarin*^{1}*: tuqran* BM

18 1 *aqṣā: ayḍā* || *bi-al-irādah* BM, EH || 8 *tarkībāt* BM, EH || *ṣuwariyyah* BM || 13 *māʿalayh: fāʿiliyyah* BM || 16 *mukhālifah* (cf. 19:3)

19 2 *allatī:* + *yūjad limā* EH || 7 *lahā:* + *ʿindamā yūjad* BM, EH || 14 [*wa-*] EH || 17 *hādhā:* + *an* BM, EH || 19 *yanfaʿuhum: bi-baʿḍihim* BM

20 5 [*lā*] EH || *māhiyyah: mihnah* EH || 7 *zamān:* + *mā* BM, EH || 8 *fa-al-mihnah* EH || 13 *wa-al-mustanbiṭ* BM, EH, F || 16 *anfaʿ*

21 5 *allatī:* + *"bihā"* F || 6 *bimā: "mā"* F || 7 *ghāyah:* + *mā* BM, EH || 16 *tabtadī: "tatabaddal"* F || *lā: innamā* BM, EH || 17 *illā maʿ: al-anfaʿ* BM, EH || *aw*^{3}*: idhā* BM

22 5 *al-uwal: "al-ūlā"* F || 12, 13 *garaḍ* BM || 12 *ṣināʿah:* + *ṣināʿah* EH || 14 *al-ḥiraf: al-siyar* BM, EH || 19 *wa-li-ajl* BM, EH

23 2 [*wa-*] || 3 *annah: in* BM || 4 *khayyir:* + *illā* (read *lā*) *khayyir* BM, EH || 7 *khulquh* BM, EH || *fikrih* BM, EH || <*wa-*>*ʿalā* || 11 *wa-kadhālik* BM, EH || 13 *fa-faḍīlatuh* BM || *wa-kull* BM || *fī: min* BM, EH || 17 [*minhā*] || 18 [*lammā kānat*] || 19 *al-muqtarinah* BM

24 2 *wa-bayān: faʾinn* || 7 *gharaḍ* BM || *bi-manzil* BM || 16 *lah: tilk* || [*wa-*] BM, EH || *faḍīlatuh* BM, EH

25 6 *kadhālik:* + <*ṣāḥib*> || 9 *wa-tilk* BM, EH || 12 *natamakkan* BM || 14 *al-ṣināʿah: al-ṣināʿāt* BM, EH || 18 *al-juzʾiyyah: al-ḥarbiyyah* EH? || 19 *al-ṣanāʾiʿ:* + *al-ḥarbiyyah* EH?

26 13 *faʾin:* + *kān* BM, EH || 16 *an*^{2}*:* + <*yakūn*>

27 5 *allatī*^{1}*: "innamā"* F || *munfaridah* BM?, F || 6 *al-khulqiyyah: "al-fikriyyah"* F || 8 *huw: hawā* EH, F || 9 *huw bih: "hawāh"* F, EH? || 13 *illā an: "allā"* F || 18 *al-faḍīlah al-fikriyyah hiy: "faḍīlah khulqiyyah ghayr"* F || 19 *al-faḍīlah:* + *"al-fikriyyah"* F || *al-khayriyyah: al-khayr* BM, EH, F

28 2 *tastanbiṭuhā: "tustanbaṭ bihā"* F || 8 *al-thaʿlab* BM, EH, F || 12 *in lam yuqsar* EH || 19 *tashbah* BM, EH, F

29 2 *lays:* + *innamā* BM, EH || 5, 13, 15 *al-ʿamaliyyah* BM, EH, F || 10 *hādhih:* + *"fī"* F || 19 *wa-taʿlīm* EH || *ʿadīdah: wāḥidah* BM, EH

30 3 *wa-yuʾkhadhū* BM || 8 *fī:* + *marātib* EH || *riʾāsah:* + *riʾāsah* BM, EH

31 6 *al-malakāt:* + <*min*> || 7 *al-manṭiqiyyah* BM, EH || 10 *ʿalā talaqqī: ḥattā yulaqqin* EH || 11 *ṣināʿatuh* BM, EH || 12 [*faḍāʾil*] BM || 16 *ʿalayh al-ān: al-amr ʿalayh* BM, EH || *al-manāzil* BM, EH

32 2 *māhiyyah: mihnah* BM?, EH, F || 9 *min al-māhiyyah al-juzʾiyyah: "hiy al-mihnah* (= BM, EH) *al-ḥarbiyyah"* F || 14 *li-insān:* + *insān* BM, EH || 15 *al-juzʾī: "al-ḥarbī"* F || 16 *al-juzʾī: al-ḥarbī* BM, F || 16, 17 *al-juzʾiyyah: al-ḥarbiyyah* || 19 *al-manṭiqiyyah* BM || *al-ʿulūm: al-umūr* BM, EH

33 4 *lam: thumm* || *yajʿal* BM, EH || 5 *al-mithālāt:* + *mithālāt* EH || *tukhayyil* BM, EH || 6 *al-taṣdīq: al-taqrīr* BM || [*bih*] BM || 7 *bi-ṭuruq* BM || 9 *ishturiṭat* BM, EH || 10 *mashhūrah: mashwariyyah* BM, EH || 11 *lahā: bihā* BM, EH || 12 *talīn: tariqq* EH || 13 *lahā*^{2}*: bihā* BM || [*bih*] EH || *wa-taqsū* BM, EH || *takhbū: taʿāf* (cf. 33:17)

34 1 *al-ṣinfayn* BM, EH || 6 *al-ʿulūm* BM, EH || 8–9 [*yunāqiḍuh wa-muḍāddat mā yu-*] BM, EH (cf. 35:14) || 11 *wuṭṭiʾat* BM, EH? || 12<*a*>*w aktharihim* || 14 *fī: fa-yumayyiz* BM, EH || 5 *wa-yuḥṣī* || 16 *ʿadad* BM, EH

35 9 [*aw*^{1}] EH || 10 [*wa-*^{1}] BM, EH || 13 *al-khayr: al-jins* BM, EH || 18 *ḥarbiyyah* || 19 *yantafiʿūn* BM

36 1, 3, 5 *mihnah* BM, EH || 3 *al-ḥarbiyyah* || *yufawwaḍ* BM || 10 *qarībā: fa-raʾīsā* || *fa-māddatuhumā: fa-khādimā* BM?, EH || *faḍīlatih*, BM, EH || 11 *aw fī:* + *kull* BM, EH

37 9 *tarṣakh* EH? || 11 *li-riʾāsah* BM, EH || *wa-lidhālik* EH || 12 *ḥāluh:* + *ḥāl* BM, EH || 13 [*nafsah*] BM || *khāṣṣiyyā:* + *madaniyyā* BM || 14 *ṣināʿatuh:* + *ṣināʿah* BM, EH || 18 *mā istaʾhal* BM || 18–19 *bi-malakatih wa-bi-mihnatih* BM, EH

38 1 *al-ghāyah* BM, EH || 7 *al-takhyīlāt* BM || 11 <*wa-*>*al-muntazaʿ* || 12 *li-yakmul* BM, F || 14 *ʿalā mā: kamā* BM, EH || 19 *malakatah* BM, EH

39 1 [*bihā*] BM, EH, F || 3, 4^{1,2} *tastaʿmil* BM, EH || 6 *bashariyyah: bisharīṭah* BM, EH || 10 *ghayrih* BM, EH, F || 11 *an: "man"* F || 12 *man siwāh* BM, EH, F || 14 *mā*^{2}*: man* BM, EH || *hal huw an: huw alladhī*

40 11, 18^{1,2} *millah* BM, EH || 12 *millah* || 13 *al-barrāniyyah* BM, EH || *fa-al-millah* EH

41 6 *wa-al-ʿadam* BM, EH || 10 *al-kāʾinah: al-makāniyyah* BM, EH || *yataḥarrā* BM, EH || 15 *yumkin* BM, EH

42 1 *yusaddid bihā* BM, EH || 2 *mihnah* BM, EH || 4 *nawāmīs* BM, EH || *mihnatah mihnah* BM, EH || 6 *mā: man* BM, EH, F || 9 [*allatī*] F || 10 *mā: "man"* F || 12 *fīh: minh* BM, EH + *awwalā* BM, EH, F

43 2 *rubbamā: wa-bimā* EH || 2–3 *ṣināʿatuh wa-mihnatuh wa-faḍīlatuh* BM, EH, F || 5 *idh* BM, EH, F || 8 *wa-huw: huw* BM, EH, F || 10 *bi-jamīʿ* BM || 15 *aw: idh* BM || *bi-jamīʿ* || 17 <*wa-*>*dūn* || 19 [*kulluh*] BM

44 7, 12^{1,2} *millah* || 8 *tabayyan:* + *min* || *bi-baṣīrah* BM, EH || 9 *bi-takhayyul* EH || 11 [*fī nafsih*^{1}] || 12 *lah*^{1}*:* + <*bal*> || *mutakhay-yal* BM || *baqā: wa-yaqīn* BM, EH || 15 *al-ʿulūm:* + *al-naẓarriyyah* EH || *muwaṭṭaʾā* BM

45 14 *yazūr: yuzid* EH || 17 *taʿallam* BM, F

46 1 *fīhā* BM, EH || 3 *yaqharān* BM, EH || 7 *ajzāʾ min: juzʾ min*

azjā› BM, F || 9 *‹alayhā* BM, EH || 15 *aw al-imām huw bi-mihnatih wa-bi-ṣinā‹atih* BM, EH || 17 *bi-mihnatih* BM, F || *marḍā: +lah* BM || 18 *al-ālāt* BM + *allatī* BM (cf., however, St. 124:1 and 3) || 19 *ṭibbah* BM, EH, F || [*an*] F?, cf. St. (124:5) || *yakūn: + lah* BM, EH

47 1 [*an*] || 5 *wa-al-ṭuruq* BM.

INDEX

[Names and titles cited by Alfarabi]